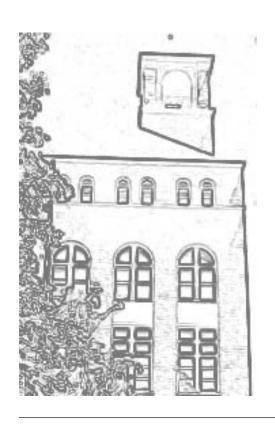
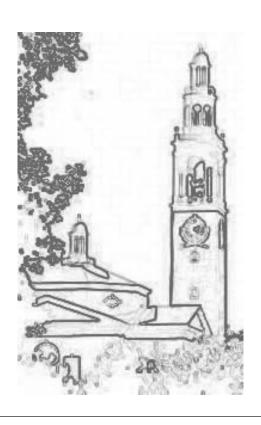


City of Burlington, Vermont 1996 Municipal Development Plan







CITY OF BURLINGTON, VERMONT 1996 Municipal Development Plan

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Adopted by the City Council

10 June 1996

CITY OF BURLINGTON, VERMONT 1996 Municipal Development Plan

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Introduction

Burlington's Municipal Development Plan presents a vision for land use and development over the next ten to twenty year period. It will prepare the city for growth, provides a reliable basis for public and private investment, and will guide the city into the twenty-first century.

History of Planning in Burlington

Land use planning has played a central role in shaping the City of Burlington since 1925 when voters authorized "the creation of a Municipal Planning Commission in accordance with Act No. 107 of the Laws of Vermont of 1921." This action eventually resulted in the city's first land use plan and zoning ordinance in 1947, a subdivision ordinance in 1955 to control the layout of city streets, and subsequent revisions to each as needed.

In the 1960's, the City undertook a major urban renewal program in an effort to revitalize the downtown area. Large tracts of land were created in the Central Business District (CBD) to be available for commercial development. However, urban renewal also eliminated neighborhoods, altered street patterns, and significantly changed the historic context of the downtown.

Since 1973, in accordance with the Vermont Municipal and Regional Planning and Development Act (VSA Title 24, Chapter 117), a Municipal Development Plan for the City of Burlington has been prepared every five years. In 1988, the Vermont legislature amended the Act and other statutes affecting land use planning. Collectively known as "Act 200," these changes encouraged comprehensive planning at the state, regional and local levels, facilitated cooperation between communities, and offered a forum to resolve disputes. Communities that choose to plan must do so in an effort to address a common set of statewide goals. The 1991 Burlington Municipal Development Plan was Burlington's first plan to be guided by the goals of Act 200.

Purpose and Role of the Plan

A community's Municipal Development Plan, or "Master Plan," must be both visionary and strategic. The Master Plan outlines goals and objectives for the future and is the principal guide directing land use policy and decision-making. It defines the policies, programs and specific actions necessary to attain these objectives.

A Master Plan is prepared every 5 years in accordance with state statute and has standing in statewide regulatory proceedings including Act 250. All City plans and programs which effect land use and development, including the Zoning Ordinance, Subdivision Regulations, Impact Fees and Capital Improvement Plan, must be in conformance with the policies and directives found in the Municipal Development Plan.

For the vision presented in this plan to become a reality however, other steps must follow its adoption. These include:

- **revision of municipal ordinances and bylaws** to ensure the Plan's goals and policies are properly reflected, implemented and enforced;
- **development of a capital budget and program** to outline long-term funding needs and commitments;
- **development of area-specific plans, programs and policies** to offer more detailed and site-specific strategies for selected parts of the city;
- ongoing evaluation of plans, policies and programs; and
- **continuing community involvement** in the planning and governing process.

This Master Plan must be considered a "living document" and not placed on a shelf until the next revisions are due in 2001. It must be continually reviewed, modified and expanded as necessary to reflect changing circumstances and opportunities.

Creation of this Plan

The process for creating a Municipal Development Plan requires extensive research, analysis and collaboration at all levels in the city. The Plan must be comprehensive in its scope, yet as specific as possible in its direction. And most importantly, the Plan must reflect the needs and desires of the residents of the community.

REVISIONS SINCE 1991

Burlington's previous Municipal Development Plan was adopted in June of 1991 at the end of a three year process which included extensive citizen participation. The 1991 Plan was, by and large, written by the residents of the city - a fact in which Burlington takes great pride.

The 1996 Plan is <u>not</u> intended to be a complete rewrite. Instead, it is intended as a "fine tuning" of the vision for the city - to update information and improve the documents overall presentation. While the new document retains most of the previous plan's overall philosophy and priorities, there are new policy directions - specifically with regard to transportation. City initiatives and programs created since 1991, and new issues not previously considered, were added. Finally, the City sought to make this Plan more strategic in it's approach by identifying priorities and defining benchmarks where feasible.

Substantive areas of difference between the two plans include:

- Inclusion of the **Old North End Enterprise Community** as a target area;
- Elaborating on the 1991 Plan's emphasis on **sustainable development**;
- Pursuit of multi-modal transportation solutions, the integration of modes into a mobility system, and design solutions to meet the broader needs of the City and its neighborhoods;

- Requires the **redesign of the proposed Champlain Park Way** (a.k.a. Southern Connector) to be more compatible with the surrounding neighborhoods;
- Emphasizing the regional nature of many of the issues facing the City;
- Introduction of concepts related to **urban ecosystems**;
- More comprehensive **economic development** strategies; and,
- Consideration of potential opportunities and impacts posed by **emerging technologies and telecommunications**.

CITIZEN PARTICIPATION

The Planning Commission and staff from the Planning & Zoning Department began a review of the 1991 Municipal Development Plan in early 1995 with the intent of defining the status of the many policies and initiatives. Staff and Commissioners met with representatives of other City Departments and Commissions to gather information, update priorities and identify new initiatives. In September the Planning Commission began a series of bi-weekly work sessions concentrating on each section of the Plan. Representatives of other City Departments and Commissions and members of the public, were invited to participate in the discussion and offer their comments. Staff and Commissioners also appeared on community access television to discuss revisions to the Plan.

In January 1996 the Planning Commission, along with other City Departments, Commissions and the public, began a review of the initial draft of the 1996 Burlington Municipal Development Plan prior to entering the formal adoption process in February. The adoption process itself provided opportunities for both formal and informal review and discussion. A total of four warned public hearings were held on drafts of the Plan as it made its way from the Planning Commission to the City Council and final adoption on June 10, 1996. In adopting the Plan, the City Council requested the Planning Commission consider amending the new Plan in the near future specifically to make complete implementation of Community-Based Policing a higher priority.

PLANNING DOCUMENTS AND TECHNICAL STUDIES

Revisions to the Municipal Development Plan were greatly advanced with the inclusion of several planning studies and technical reports prepared by various city departments since 1991. In addition, many Commissions had recently completed, or were in the process of creating, strategic plans for their organizations and operations. To the extent practical, these priorities are also included in this Plan. A *References and Resources Section* is found at the end of the Plan to provide a listing of these reports and others that are relevant to the issues and proposals presented.

Much of the information for the maps in this Plan was analyzed, and the maps themselves developed, using the Planning and Zoning Department's Geographic Information System (GIS). GIS performs complex analyses of geographically related information and is capable of displaying that information in tabular or map formats. The City continues to maintain this system as an important decision- and administrative-support tool.

Overarching Principles

The overriding philosophy that will guide future development of Burlington is "sustainability." From annual town meetings, volunteer governments and working hill farms, stewardship of Vermont's communities and landscapes are the fabric and culture of the state and its people. The concepts behind sustainable development are found in Vermont traditions over the past 200 years - we make the best of what we have, we use only what we need and we pass things on to the next generation. In summary, sustainable development is nothing more than "future-oriented" common sense.

SUSTAINABLE DEVELOPMENT

Decisions and choices made today, should not limit the choices and opportunities of future generations.

Elements of a "sustainable community" include:

- **Ecological Integrity**: including satisfying basic human needs such as clean air and water; protecting ecosystems and biodiversity; and, pollution prevention strategies.
- **Economic Security**: including local reinvestment; meaningful employment opportunities; local business ownership; and, job training and education.
- Empowerment and Responsibility: including respect and tolerance for diverse views and values; a viable non-government sector; equal opportunity to participate in decision-making; and, access to government.
- **Social Well-Being**: including a reliable local food supply; quality health services, housing and education; creative expression through the arts; safety from crime and aggression; respect for public spaces and historic resources; and, a sense of place and self-worth.

Introduction Page 4

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^{*} Institute for Sustainable Communities, 27-28 June 1995.

If we are to have a sustainable community, future development within the City of Burlington must further the following principles:

- Support and strengthen our neighborhoods.
- Concentrate development within growth centers.
- Utilize mixed-use development and multi-use structures.
- Lessen the dependence on the automobile
- Respect the city's history and natural systems
- Support long-term solutions
- Promote cooperation through working partnerships

Burlington Demographic Profile

This section presents a basic overview of some of Burlington's socio-economic trends. More detailed information pertaining to economic and housing characteristics can be found in those respective sections of the Plan.

The City of Burlington remains Vermont's most populated community with a 1995 estimated population of 38,657 - approximately 30% of the Chittenden County population.

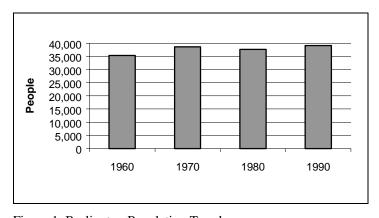


Figure 1. Burlington Population Trends.

Historically Burlington's population has experienced a series of "ups and downs" with only small real increases over time. Burlington witnessed a 2.4% population decline between 1970 and 1980.

According to the 1990 US Census, this trend was reversed as Burlington's population increased by 3.8%

in the last decade to 39,127. This figure includes about 5,000 students living on campus and about 4,000 off campus.

This marginal growth rate is in contrast to population growth experienced by other communities in Chittenden County, and is indicative of continuing suburbanization within

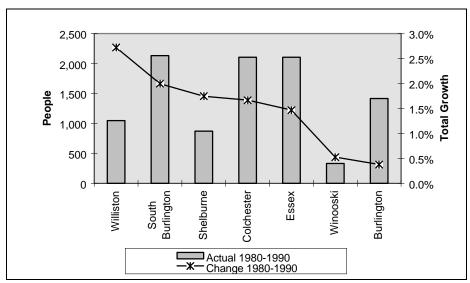


Figure 2. Actual vs. Percentage Growth 1980-1990

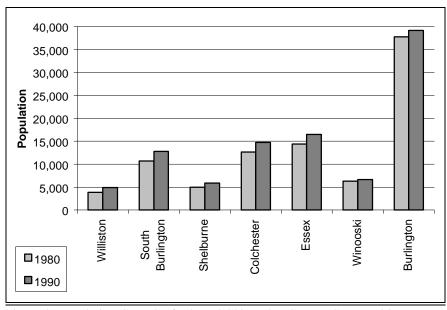


Figure 3. Population Growth of selected Chittenden County Communities.

Recent projections of population growth completed by the Vermont Health Care Authority (1993) indicate that Burlington's population will continue to remain flat, if not actually decline over the next 15-20 years. However, it must be understood that there are many variables associated with predicting population growth. Consequently, projections can be inherently inaccurate over time.

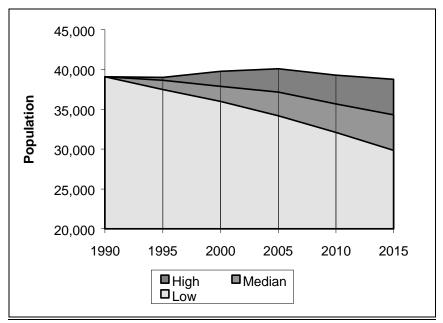


Figure 4. Burlington Population Projections

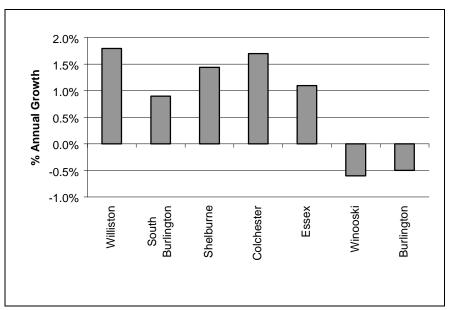


Figure 5. Projected Population Growth to 2015.

However, Burlington's population is not the whole growth story. With demographic trends towards smaller families, growth of housing must also be considered. Growth in housing has consistently exceeded population growth since 1960. The city continues to be an attractive place to live - especially as people are drawn to the many amenities the city has to offer including convenient access to shopping, services and employment opportunities.

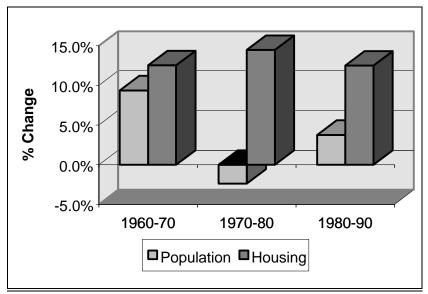


Figure 6. Comparison of Population and Housing Growth in Burlington.



City of Burlington, VT 1996 Municipal Development Plan

State Office Building



Burton Snowboards



High Grove Court

Burlington's diverse land uses - our neighborhoods, downtown core, waterfront, institutions and natural features - are the essence of the city's sence of community.



Intervale Farming

I. LAND USE PLAN

Vision Statement

This Plan envisions Burlington as a city where:

... neighborhoods have a sense of community and place, and are linked to each other via a network of public transportation, pedestrian and bicycle routes. Each neighborhood provides diverse and integrated housing opportunities for rich and poor, young and old, single people and families. While the historic patterns of development in each neighborhood are respected, neighborhoods reflect changing family, work and childrearing patterns, and offer everyday services such as markets, pharmacies and child care. Residential streets are reclaimed as public spaces, oriented to pedestrians, and traffic is calmed - with minimal through traffic and non-residential parking.

... the **downtown** is the commercial, cultural, governmental and business center of the region, and an important attraction and economic engine for the state. Downtown Burlington is also a cultural district with theaters, studio space and galleries, and a respect for the city's heritage and proximity to Lake Champlain. Public transportation plays a dominant role in providing access and mobility. There is appropriate use of vacant and underused land, renovation and adaptive reuse of existing buildings, and it is friendly to the pedestrian and bicyclist - lessening traffic congestion and the demand for parking. Downtown is also a neighborhood - offering everyday services, employment and housing for city residents. The area is active 24 hours a day because people work, play and live here.

... the region's, and city's, **natural systems and working landscapes** play a vital role in sustaining future development and are protected from adverse impacts of development through creative site planning and the successful implementation of local and regional growth center planning.

... religious, educational and medical **institutions** have a respected place in the community. In partnership with the City and business community, they enhance our quality of life - working cooperatively to address development, transportation, housing and neighborhood issues. The educational institutions strive to house non-commuting students on campus and keep cars and traffic out of the neighborhoods. The institutions inform and work with the city and the public regarding projects and programs affecting the community. They continue to share valuable skills, resources and leaders.

... the waterfronts, both lake and river, are valuable public assets designed to serve the residents of the community. The Downtown Waterfront offers a mix of multi-season recreational opportunities, cultural, commercial and residential uses, and is linked to the downtown and surrounding neighborhoods by public transit, pedestrian pathways, stairways and other design features. Public access is assured through public parks and passive recreation and conservation areas. Pedestrian traffic and the use of bicycles is encouraged. The built environment on the waterfront is compatible with the downtown and surrounding residential neighborhoods to ensure a strong sense of community and year-round vitality. The ecology of the waterfronts, their fragile lands, and plant and animal life are protected and interpreted for the public to understand and enjoy. Much of the lake and riverfront outside the downtown remain undeveloped consisting of passive recreation areas, conservation lands, public access and protected natural areas.

Regional Growth Center

The City of Burlington is the largest city, and most intensely developed community in Vermont. Burlington's development pattern is characteristic of many small New England cities and villages with clear boundaries, higher density mixed uses surrounded by working farms and forests, and served by basic infrastructure - the definition of what we today call a "growth center." These features help to define Vermont's unique identity, support our high quality of life, and form the qualities that attract new business development and tourism.

However, traditional development patterns are becoming blurred and threatened by suburban development on the fringes including large single-use developments such as shopping malls and planned residential developments, strip commercial development along major highway corridors, and the continued dominance of automobile and associated parking lots, traffic congestion and highways. A more traditional pattern, through planned growth centers is necessary to protect and invigorate existing cities and villages, maintain working farm and forest lands, and bring back a more sustainable and affordable form of community development.



The 1991 Chittenden County Regional Plan places portions of Burlington (the Downtown Waterfront, Central Business District and Hill Section) within a "Regional Growth Center." The purpose of the regional growth center "is to provide for regional shopping centers, higher education facilities, health centers, financial centers, government and cultural facilities, high density housing, civic and convention centers, recreational opportunities and the necessary infrastructure to serve these functions." The welcomes City opportunities and responsibilities that are associated with serving as the regional growth center. For this vision to become reality however, all communities in the region must

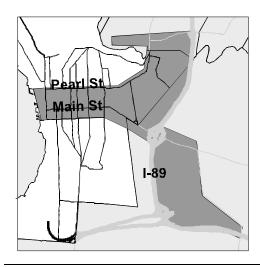


Figure 7. Regional Growth Center

work together towards a more traditional and sustainable development pattern.

A Vermont City

By nearly every definition, Burlington is a city. A city, however, at a Vermont scale. Burlington has tall buildings, but most remain under five stories. Burlington has traffic and public transit, but not snarled freeways and subways. Burlington has colleges and a university, theaters and galleries, offices, restaurants, hotels, banks and shops - yet still with under 40,000 residents.

Burlington is also, in many ways, a traditional Vermont village in both form and function. The city has a compact form, and serves as a central place of commerce, housing and government.

This description as both city and village is the essence of what makes Burlington such an attractive place. David Sucher's book *City Comforts: How to Build an Urban Village* (City Comforts Press, 1995), describes the metaphor of the "urban village" as "a shorthand way of describing the *feel* we want from our cities." An urban village is not so much a location, but the *feeling* of a place - its personality. Urban villages aren't built - they evolve.

Burlington clearly has its own personality. Burlington's character and sense of place is widely celebrated - neighbors know and help one another, newcomers and visitors are welcomed, residents actively participate in local government, and people truly care about the City's future. The city's special sense of place has evolved over time by respecting historical patterns and architecture, supporting neighborhoods, protecting valuable resources and places, and putting the City's residents first.

The nurturing of Burlington's human scale, social character and sense of place is the primary objective of the City through the implementation of this Plan.

ROOM TO GROW

Burlington has relatively little undeveloped land remaining on which to grow. The entire city consists of 10,304 acres - of which 3,847 acres are water. Yet Burlington will continue to grow, both as a community, and as the economic, social, and cultural core of the region. This Plan anticipates continued and sustainable growth in housing, services, employment, and population, while protecting the city's natural systems, maintaining its human scale and neighborhoods, and celebrating its heritage.

The basic land use components found in Burlington include residential, commercial, industrial, public/semipublic, and vacant land. Between 1960 and 1980, vacant land decreased by about 800 acres. In 1980, residential uses accounted for 20 percent of Burlington's land, while 38 percent remained vacant. By 1989, 28 percent of Burlington was residential and only 22 percent was vacant.

Vacant land is only a portion of the future development potential however. Many properties remain significantly "underdeveloped"*. Currently developed parcels and many surface parking lots could be more intensely developed through multi-use structures[†], taller buildings, smaller setbacks. Detailed information regarding the existing development potential within the core of the city is lacking however, and will be necessary in order to strategically target areas for infill. Most often this information must be developed on a case-by-case basis. These inefficiently developed areas represent some of the best opportunities for future growth.

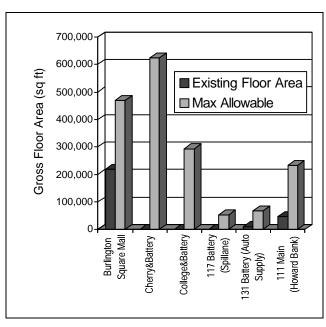


Figure 8. Examples of Existing vs. Potential Density

However <u>complete</u> build-out is not likely to happen. Many parcels are substantially developed, many with historic buildings, or include areas that are inappropriate for intense development. Often land characterized as vacant cannot, and should not, be developed because it is either wetland or other natural area, has steep or unstable slopes, or is a small, oddly shaped lot. None-the-less, Burlington can easily accommodate growth

^{* &}quot;Underdeveloped" refers to those parcels that are developed at less than 50 percent of the average of the existing or allowable density in the zoning district.

^{† &}quot;Multi-Use Structures" refers to buildings, for example, with: parking below grade, street level retail, and office and/or residential uses above the street.

predicted by the year 2000 and sustain itself as the regional hub without significantly increasing density, expanding the boundaries of the CBD, or significantly changing its zoning ordinance. The real challenge is to direct future growth into appropriate areas while retaining the human scale and character of the city.

City of Neighborhoods

Burlington's vitality and sense of community comes largely from the strength of its neighborhoods and the diversity of its people. The boundaries of a neighborhood are largely defined by where you live, and more importantly the <u>people</u> who live near you. While there are distinct neighborhood areas within the city, there are many smaller components within each that have their own identity and characteristics.

The individuality of each area of the city will be respected in order to support and strengthen established neighborhood land use and design patterns. For example, setbacks and building height should generally reflect existing street patterns - they needn't be uniform throughout the city. Working with neighborhood representatives, the City will identify design features worthy of protection, and work with citizens and the private sector to improve the quality of neighborhoods.

Within each neighborhood, this plan vigorously promotes greater opportunities for pedestrian and bicycle travel, access to public transportation, traffic calming of residential streets, compact mixed-use development and public greenspace in an effort to enhance neighborhood identity and character.

Many neighborhoods, however, are in need of improvements to existing structures and infrastructure, a greater diversity of land uses, and additional infill density to strengthen them within our dynamic environment. Opportunities include:

- Duplexes and single-occupancy accessory apartments (SOAA) in low-density residential neighborhoods.
- Residential uses, including single-room occupancy (SRO) with no kitchens, in upper floors of commercial buildings.
- Rezoning the mouth of the Winooski River from waterfront commercial to a residential/recreation/conservation zone.
- Performance standards to protect residential neighborhoods from the impacts of adjacent industry.
- Mixed uses to put daily services and jobs within walking distance of residential areas.
- Childcare facilities in all neighborhoods.
- Increasing density in Neighborhood Activity Centers and designated locations along major transit corridors.
- Embarking on a greening program to replace unnecessary pavement with landscaping; encourage a diversity of open spaces within each neighborhood

including pocket parks and community gardens; and the promotion of rooftop and wildflower gardens.

NEIGHBORHOODS IN TRANSITION

Many neighborhoods in the city are changing, reinforcing or still establishing their own identity. Through sensitive and strategic design, regulation and investment, the City can target these areas in order to fulfill community goals.

Riverside Avenue

Historically a mix of residential, industrial, public and commercial uses, Riverside Avenue is slated for major road reconstruction that will more clearly define the street edge. The

south side of the street has been the site of rapid residential development. Ways must be found to alleviate traffic congestion, improve pedestrian connections into adjoining neighborhoods, and contain stormwater. Strong erosion control measures are necessary to protect steep slopes and water quality. The northern side of the road runs adjacent to the Winooski River along a very steep embankment. This area provides a buffer from the busy street for the river and the trails along the southern river bank.



City of Winooski

The City encourages a more urban configuration of Figure 9. Riverside Avenue Area. mixed residential and commercial uses that respond

to the everyday needs of area residents, and the protection of the riverbank. The area along the river bank is ideal for a greenway corridor connecting to the Intervale. The City should consider rezoning portions of the north side of Riverside Avenue along the river to an open space zone such as Recreation/Conservation/Open Space (RCO).

Grove Street Neighborhood

At the eastern end of Riverside Avenue is the Grove Street neighborhood. This area lies across the Winooski River from the City of Winooski, and is connected with the City of South

Burlington via Patchen Road. The Grove Street neighborhood serves as an important gateway to both cities of Burlington and Winooski.



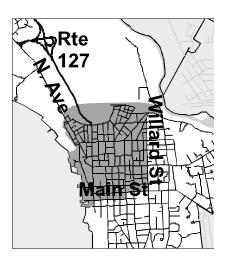
As with Riverside Avenue, areas adjacent to the river have very steep banks and sensitive habitats. These must be cleaned-up where necessary and protected to prevent erosion and maintain water quality. Opportunities to preserve a greenway corridor along the river for improved public access and passive recreation should be considered.

Grove Street is a neighborhood with a rich history and has strong ties to the City of Winooski. The riverfront surrounding the Winooski Falls and the associated mill buildings are important historic features. Pedestrian access across the river must be ensured as many residents are served by neighborhood conveniences found in Winooski.

The Old North End Enterprise Community

Neighborhoods immediately north and south of Downtown have suffered neglect and disinvestment over the years. These areas need public and private investment in infrastructure, housing, and street amenities to improve their residential and commercial environment.

In 1994, a portion of the City of Burlington was named an Enterprise Community by the US Department of Housing & Urban Development - one of 75 nationally. This area encompasses the neighborhoods of the Old North End, Downtown Waterfront, Central Business District, and the neighborhoods immediately south of the CBD generally bounded by King and Willard Streets (Census Tracts 3, 4, 5 & 10). This area is defined by its pervasive poverty, high unemployment and general distress. In fact, no other neighborhood in Vermont matches Burlington's Enterprise Community (EC) in terms of population living below the poverty level.



In the face of many challenges, the EC remains a viable Figure 11. Old North End Enterprise residential and commercial area with many assets and Community. opportunities. There is a housing stock that is decrepit,

but repairable. Existing small business require only a bit more space, assistance or capital in order to prosper. There exists a well-established network of "third-sector" organizations with years of experience. And perhaps more importantly, there remains a sense of community and neighborhood identity that is working hard to make the EC a better place.

It will be a high priority of the City to actively promote development and improvements within the EC Zone, and to implement the strategies found in Common Ground: A Strategic Plan for the Old North End Enterprise Community which is incorporated into this Plan by reference.

South End Neighborhood

Burlington's "South End" neighborhood has seen significant increases in residential and industrial development over the past decade. This area of the city has become increasingly attractive for residential growth given its proximity to downtown and the lake. However, residents are faced more and more with the impacts (most typically noise and truck traffic) resulting from the expansion of industrial uses nearby. This creates possible conflicts as the City looks to attract additional businesses to this area - the largest industrial zone in the city.

1-189

Current zoning offers little relief for South End residents. Buffers between residential and Figure 12. South End Neighborhoods. industrial zones are small, and use restrictions

do little to limit the types of uses that are most likely to generate high volumes of truck traffic. At the same time, zoning has encouraged increased residential development in what has traditionally been a predominately industrial area. The result has been the completion of several large residential developments (Red Rocks, Lake Forest, Ledgewood, Southwind). The outcome of these converging policies has had unsatisfactory impacts on many South End residents, as well as posing uncertainty for existing and future industrial users.

The City must take immediate steps to ensure industrial uses within this area are more compatible with the residential character of the South End to minimize through traffic, improve air quality, lessen noise and improve safety for cyclists and pedestrians, especially young children.

Growth Areas

The City of Burlington expects, and welcomes, continued growth and development over the next ten years. In an effort to facilitate this growth, and to continue to encourage urban densities and use patterns, the City will seek to concentrate future development activity into the following areas:

DOWNTOWN

Burlington's downtown serves as the region's cultural and commercial core. It is home to several of Vermont's largest financial institutions, offices for city, state and federal government, entertainment and cultural centers such as the historic Flynn Theater and Memorial Auditorium, and premier retail including the Church Street Marketplace and the Burlington Square Mall.

Burlington is working hard to encourage additional housing downtown in order to bring people closer to their places of work. Additional housing makes more efficient use of space and public facilities, may lessen the need for automobiles and parking, and adds vitality and an improved level of security in the evening. The City encourages housing downtown by offering density bonuses for providing public benefits such as public parking and affordable housing, easing parking requirements for mixed-use development that includes housing, and providing amenities to residents of this neighborhood. Future growth of housing should generally keep pace with growth in commercial development.

The City will continue to attract and support a range of retail and office developments in the downtown - diverse in both type and scale. As an urban neighborhood, community-oriented shopping and services (i.e. general merchandise, grocery, pharmacy, hardware, post office, daycare, etc.) must also be available to meet the needs of the people who work and live in or near downtown.

Downtown must remain an active and attractive place to visit, live, shop and work. Key elements for future development in this area include:

- mixed uses and increased activity at the street-level;
- increased housing opportunities of mixed types, and for mixed incomes;
- urban densities and setbacks;
- pedestrian and bicycle routes into adjoining neighborhoods;
- improved access and circulation via public transportation; and,
- amenities including pocket parks, street trees, flower boxes, street furniture, public art, bike parking, etc.

The City will encourage parking underground and behind buildings, buildings five to eight stories, and pedestrian-oriented uses at street level. The City will promote mixed use buildings, protection and adaptive reuse of historic buildings, human-scale design, building edges at the sidewalk with open and inviting storefronts, and improved public transit.

Pedestrian access should be improved through a network of connecting mid-block pathways extending north/south and east/west throughout the downtown. The initial objective is to provide pedestrian connections between the Church Street Marketplace and the Downtown Waterfront. An east/west pathway could extend Lawson Lane down to the waterfront and up to Center Street. The back rooms of buildings that open on these pathways could then be used as active commercial spaces. Later connections should include the Hill Institutions and the residential neighborhoods north and south of the Central Business District (CBD).

To gain a better understanding of the opportunities and obstacles for future development, the City should consider the creation of a detailed sector or area plan specific to the Downtown. Such a plan would help to identify and specify the infrastructure needs, density potential, development logistics and define design standards. Such a plan would serve as the primary tool for guiding private and public investment necessary to ensure the vitality of the city's heart well into the next century.

Central Business District

The Central Business District is the heart of the city's downtown and its principle growth center. Presently, about one-third of the CBD is underdeveloped with room for an additional 3-4 million square feet of development. Much of this land could be used more efficiently through setbacks that bring buildings to the sidewalk edge and "dual footprint" uses where parking, housing and commerce occupy the same structure. The City should actively concentrate general government services in the downtown before considering siting it elsewhere. The term Central "Business"

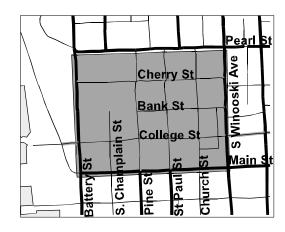


Figure 13. Central Business District.

District, however, is a misnomer for the City's true objectives for its downtown. All of Burlington's downtown, and this central core area in particular, must encourage a mixture of uses, especially housing and cultural facilities, not simply business. A more appropriate term for future consideration may be "City Center" District.

Urban Renewal District

Innovative development should also be encouraged in the former Urban Renewal District which comprises the northwest quadrant of the CBD. This area could be the site of intensive mixed-use development with land set aside for mid-block pathways and public greenspace. In addition, the City should consider the feasibility of re-introducing one or more through streets within portions of the urban renewal area. This would ease the flow of traffic through downtown by improving circulation between the north and south ends of the CBD. Possible uses for this area include housing, hotels, and a small- to medium-sized meeting/convention center and public exhibition space. The objective is to create a public attraction centrally located between the Church Street Marketplace and the Downtown Waterfront, and to make more efficient use of the downtown's largest undeveloped site.

THE DOWNTOWN WATERFRONT

Since the early 1800's, Burlington's harbor and downtown waterfront have been an important commercial area, attraction and community resource. The waterfront is the city's premier gateway, and an amenity that cannot be duplicated or replaced.

In 1990, the City prepared an Urban Revitalization Plan for the downtown waterfront to outline plans for future development. The City has completed, or is in the process of completing, several components of this Plan. However additional development will require a major investment in public infrastructure - particularly along, and including, Lake Street. New projects include the expansion of the Lake Champlain Basin Science Center, redevelopment of the Moran Generating Station and improved pedestrian and public transit with downtown connections and adjoining neighborhoods.

The City's priorities for the Downtown Waterfront begin with economic vitality and public access. An effort will be made to ensure the waterfront remains an economically <u>inclusive</u> zone. To remain active, the Downtown Waterfront must foster access for pedestrians, bikes and public transit;

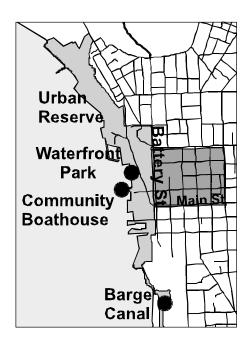
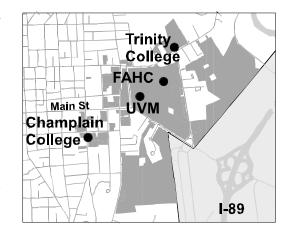


Figure 14. Downtown Waterfront and CBD.

host a variety of uses - including housing - as part of mixed-use structures; remain open to the public; and have strong linkages into adjacent neighborhoods. The 40 acre "Urban Reserve" north of the Moran Plant remains largely vacant and has limited existing infrastructure making new development costly. After clean-up, this property will continue to be preserved as open space for the use of future generations.

INSTITUTIONS

Burlington's institutions of higher learning and health care play an important role in the city's economy and overall vitality. Not only do they provide nearly 30 percent of all jobs in the city, they serve statewide educational and health care needs, attract new and expanded business to the region, and broaden cultural opportunities within the city. In order to compete in their respective missions, they must continue to change and grow over time. The Institutions do however pose impacts upon adjoining neighborhoods. Issues such as noise,



residential Figure 15. Major Institutions: University of Vermont, Fletcher Allen Health Care, Champlain College and Trinity College.

parking, traffic, housing costs and neighborhood character are of concern.

A more urban configuration of each core campus, in conjunction with fixed growth boundaries, more efficient use of existing facilities, and cooperative relationships such as CATMA (Campus Area Transportation Management Association), will allow the Institutions to continue to develop without further intrusion into the neighborhoods. The City and the Institutions are working jointly on the creation of an Institutional Core Overlay (ICO) Zone that would concentrate development within the core campuses of the University of Vermont, Trinity College and Fletcher Allen Health Care. A similar effort was completed with Champlain College in 1992, and the college is revising their Master Plan accordingly. UVM has recently begun the process of revising its 1988 Campus Master Plan. Both efforts represent examples and opportunities to work cooperatively to further their respective missions and address community issues.

As the Institutions focus future growth within these core campuses, a fresh look should be taken at the current University Campus (UC) zoning district boundaries, and allowed densities outside of the core, to ensure both continue to reinforce strong and healthy neighborhoods.

NEIGHBORHOOD ACTIVITY CENTERS

The 1991 Burlington Municipal Development Plan introduced the concept of the "Neighborhood Activity Center" (NAC) as a means to encourage small-scale commercial and mixed-use development in convenient neighborhood locations. The NAC applies the growth center concept at a neighborhood scale. In 1994, the City completed a conceptual plan for two Neighborhood Activity Centers located on North Avenue at the Ethan Allen Shopping Center, and on North Winooski Avenue and Archibald Street. Shelburne Street at the Sears Plaza was only preliminarily considered.

The intent of the NAC is to take underutilized commercial areas within a residential area, and transform higher-density, them into compact mixed-use settlements. These areas will typically include childcare centers, local banks, grocery stores, offices, pharmacies, small businesses and housing. NAC's are close to where people live and oriented to serving the neighborhood, thus lessening the need to drive for local errands and convenience shopping, These locations may also be particularly attractive as locations for community technology centers which provide support and resources to small businesses, and serve as remote office locations for larger businesses located elsewhere.

The City will draw infill development into these areas through revised zoning that promotes neighborhoodscale mixed uses, increased density, smaller setbacks, and height bonuses for shared and below-ground parking. Convenient access to transit, and bicycle and



Figure 16. Neighborhood Activity Centers.

pedestrian routes, must also be provided. The Neighborhood Activity Center Report identified modifications to the existing infrastructure, access needs, streetscape amenities and strategies to protect the character of abutting neighborhoods.

THE PINE STREET

Historically industrial corridor, Pine continued growth with industrial uses and the warehouses and factories. The City encourages the continuation of this trend and will protect this economic development corridor for future growth.

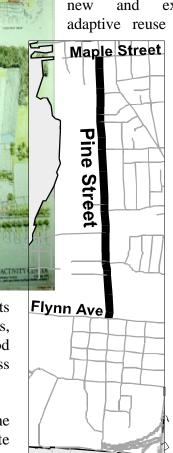
As noted previously, this area includes several adjacent residential neighborhoods within

the South End. Issues of particular concern to residents include the impact of through traffic, particularly trucks, on neighborhood streets, protecting neighborhood character, safety of pedestrians and children, and access to local parks and the lake.

The City will work to protect residential areas from the impacts of nearby industrial uses, and will promote commercial and industrial uses that are not transportation and trucking oriented. Traffic calming Figure 17. Pine Street Corridor. techniques for residential streets should discourage

CORRIDOR

Burlington's major seen Street, has new and expanded adaptive reuse of old



through traffic and trucks, and enhance neighborhood safety and character.

NORTH AVENUE

Land Use Policy and Action Plan

LAND USE POLICIES

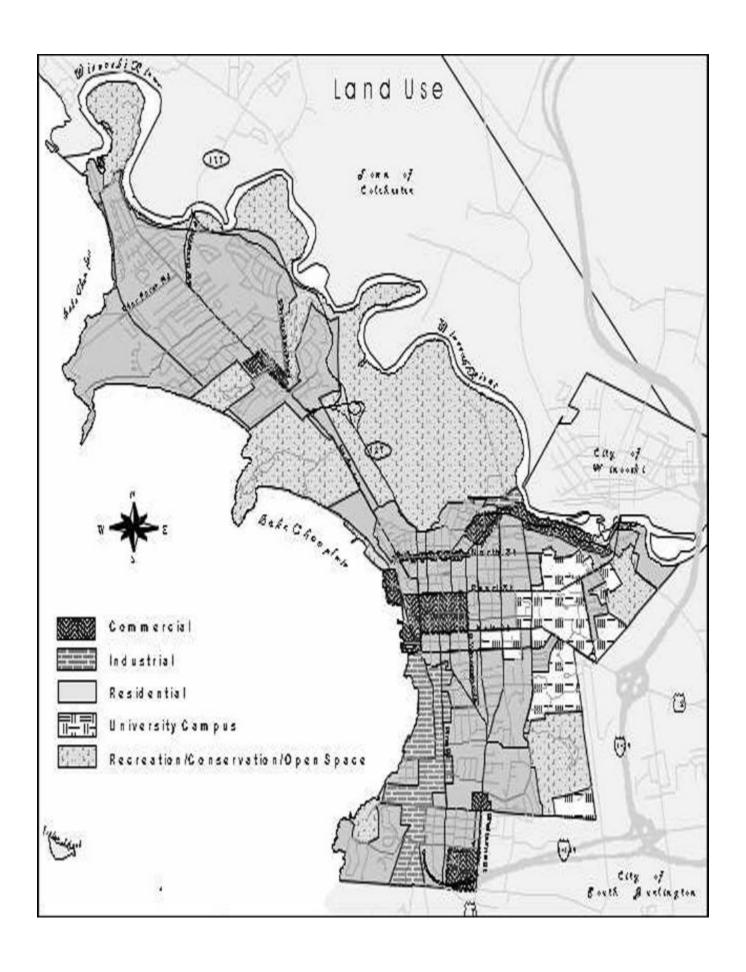
THE CITY OF BURLINGTON WILL...

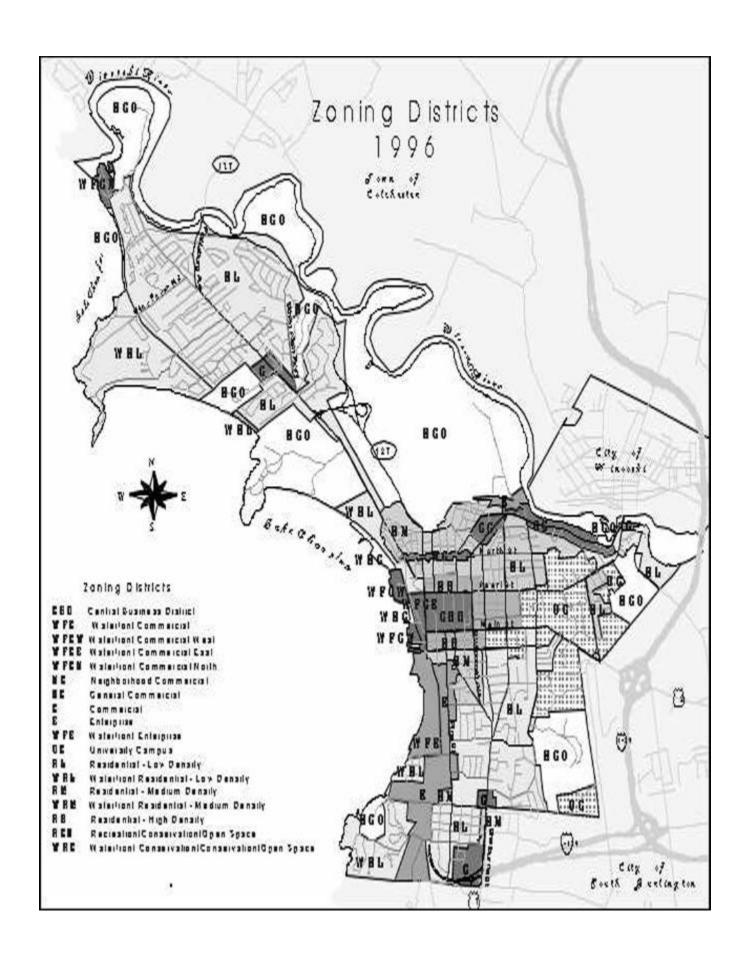
- Protect natural areas from harmful and incompatible development, and maintain the integrity of natural systems.
- Conserve and strengthen its neighborhoods.
- Encourage mixed-use development patterns, at urban densities, which limit the demand for parking and unnecessary automobile trips, and support public transportation.
- Strengthen the Pine Street corridor for commercial development while minimizing adverse impacts on adjacent residential neighborhoods.
- Strengthen the Central Business District (CBD) as the regional core while ensuring that it serves the needs of city residents, particularly those in adjacent neighborhoods.
- Target new development into the CBD, Downtown Waterfront, Pine Street corridor, Institutional Core Campuses, and the Neighborhood Activity Centers.
- Encourage development of an active, urban waterfront that offers a mix of uses, is open to the public and linked with adjacent neighborhoods.
- Encourage light industry in appropriate locations including the Pine Street corridor and the proposed Intervale Eco-Park.

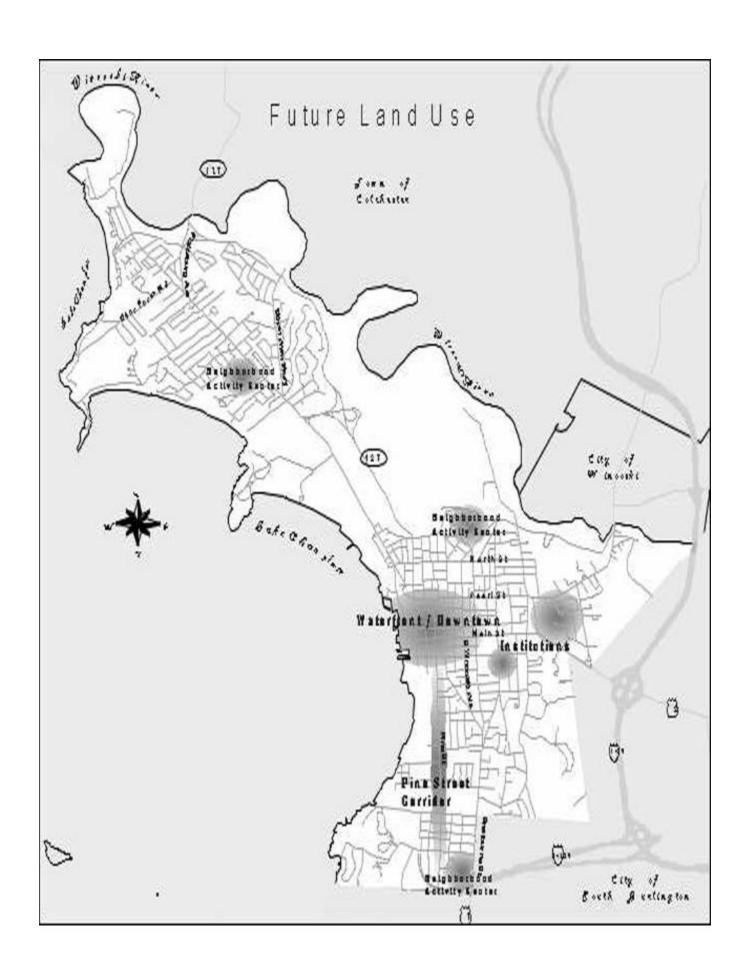
ACTION PLAN

Action Item	Lead Agency
Short-Term	
Continue to examine the desirability of reducing density allocations for natural areas, wetlands, steep slopes, and shorelines, and, if warranted, amend the zoning.	Planning & Zoning
Evaluate the zoning in the South End Neighborhood to maximize compatibility between industrial and residential uses.	Planning & Zoning
Complete zoning amendments to permit single- occupancy accessory apartments in low-density residential districts	Planning & Zoning
Rezone the southern bank of the mouth of the Winooski River to a more residential or conservation related category.	Planning & Zoning
Consider renaming the Central Business District to a term that is more fitting for a multi-use city center.	Planning & Zoning
Complete the rezoning of designated Neighborhood Activity Centers.	Planning & Zoning
Complete infrastructure and Lake Street improvements on the Downtown Waterfront.	Public Works
Complete the revision of the Zoning Ordinance to include an Institutional Core Overlay Zone.	Planning & Zoning
Participate in the preparation of UVM's Master Plan revision.	Planning & Zoning
Re-examine the UC District boundaries and allowed densities in those areas where they adjoin residential neighborhoods.	Planning & Zoning
Advocate land use and development policy and strategies that limit suburban sprawl as a member of the Chittenden County MPO and RPC.	Planning & Zoning Public Works
Advocate representative voting based on population as a member of the Chittenden County MPO and RPC.	Planning & Zoning Public Works
Develop a detailed Sector Plan for the Downtown.	Planning & Zoning

Medium Term	
Update the Urban Renewal Plan for the Downtown	Planning & Zoning
Waterfront.	CEDO
Prepare a plan for the development of a network of	Planning & Zoning
connecting mid-block pathways within the downtown	Public Works
and into adjacent neighborhoods.	
Amend the zoning to allow for small commercial uses	Planning & Zoning
within large residential developments.	
Investigate the benefits of shoreline zoning to protect the	Planning & Zoning
Lake Champlain and Winooski River waterfronts.	
Develop more detailed sector plans for Riverside Avenue	Planning & Zoning
and the Pine Street corridor.	NPA
Develop a remediation and conservation plan for the	CEDO
Urban Reserve.	Planning & Zoning
Long-Term	
Explore the feasibility of a more restrictive open space	Planning & Zoning
zoning category: Open Space-Natural Area.	
Examine the benefits and options for increasing allowable	Planning & Zoning
densities along selected portions of major transit	
corridors.	
Establish Neighborhood Conservation Plans in concert	Planning & Zoning
with each Neighborhood Planning Assembly.	NPA's
Identify with assistance from the Neighborhood Planning	Planning & Zoning
Assemblies possible locations for additional	NPA's
Neighborhood Activity Centers.	
Study the feasibility of using transfer of development	Planning & Zoning
rights program for portions of the city.	







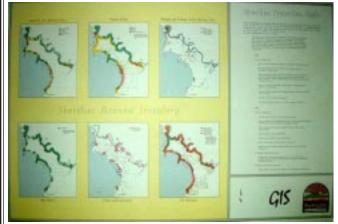


City of Burlington, VT 1996 Municipal Development Plan

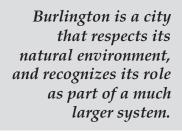
Winooski River Trail



Centenial Woods



Burlington Shoreline Analysis





Intervale

II. NATURAL ENVIRONMENT

Vision Statement

Burlington is a city that values its natural environment. Our water, air, and soils are as free from pollution as possible. Significant natural areas are protected from harmful development and pollution. The City conserves energy and resources.

Sustainable development in the City of Burlington begins with a respect and understanding of the natural systems that provide us with the resources necessary to grow, and that support our outstanding natural environs. These include basic functions such as clean air and water, but also include stable and fertile soils and irreplaceable natural communities. These resources and natural systems not only provide drinking water, breathable air, habitats and agricultural opportunities, but also serve as the cornerstone to enhancing our overall quality of life, offering numerous recreational opportunities and enhancing our competitive advantage for future growth and prosperity.

A Rich Natural Heritage

Burlington is the center of the largest metropolitan area in the Lake Champlain Basin. Located on a peninsula between the Winooski River and Lake Champlain, our urban community is intricately linked with the many facets of the larger basin ecosystem, and beyond. Although much of the land within the city has been altered to provide homes, employment, and recreational opportunities, our relationship and responsibilities with regard to the natural environment are of no less significance. Our physical, emotional, and cultural well-being are inseparably linked to the health of natural systems. Burlington residents have voiced strongly their concern about the quality of the city's natural environment and their desire to protect it.

Burlington's physical setting contributes much to our uniqueness. Among the obvious features is our relationship with the water. Of the 32 miles which make up our political boundary, 25 miles are defined by the Winooski River and Lake Champlain. No point in the city lies more than 1 and 3/4 miles from either of these two water bodies. In addition to this proximity, when we consider the streams which flow through the city, it's easy to see that much of what we do in our daily activities has the potential for adversely impacting the water which is vital for our own drinking, healthy aquatic life, and high quality recreational experiences.

Urban Ecosystems

The elements of the natural world do not recognize political boundaries, nor can they be compartmentalized, fenced off, and isolated from our day to day activities. Rain water flows off rooftops, over lawns, and down streets along a path towards the lake. The air we breathe flows freely through the mountains, forests, and meadows, across highways, homes, and industry. Much of what we do, no matter where we may happen to be, has the potential for impacting the natural environment.

Traditionally, planning for the environment and natural resources has focused on specific issues affecting public health (water quality, toxic reduction, air pollution, etc.) and the protection of individual sites or species. What these approaches often fail to consider is the fact that everything is interconnected. There is little value in protecting the site of a endangered plant population if the water flowing through the habitat is polluted. Typically, too much attention is focused on an individual plant or animal population, and not enough on the conditions that enable their existence or survival - their habitat.

Burlington recognizes its environment and natural landscape as part of an "urban ecosystem." This ecosystem includes not only natural resources, habitats and systems, but also human adaptations and enhancements such as street trees, culverted streams, and stormwater runoff. In order for growth and prosperity to be sustainable over time, future development must minimize its impact on the environment through proper location and site design, energy efficiency, waste reduction, and renewable and durable construction materials. Rivers and streams that serve a wetland, areas of forest cover that connect sustainable forest communities, and travel corridors that link important wildlife habitats all must be considered for example.

PROTECTING SHORELINES

Lands along the Winooski River and Lake Champlain are particularly fragile, and serve as important greenbelts surrounding the city. Vegetation along the shoreline should be retained to prevent erosion and filter surface runoff. The Vermont Fish and Wildlife Department suggests limiting the following activities near waters: housing and commercial development, road construction, cultivation, dumping, filling, mowing, and herbicide application. Fish and Wildlife recommends setting aside strips of naturally growing grasses, shrubs, and trees to protect the health of a stream, river, or lake.

Shorelines must not be exploited exclusively for private benefit. Appropriate public access should be encouraged in places that will not harm the ecology of these fragile areas. All development adjacent to a shoreline should be subject to Design Review, as well as review by the Conservation Board. The Waterfront Board, an advisory body to the City Council, has prepared two plans since 1990 addressing growth, protection and renewal along the Winooski River. The aim of both of these plans is the clean-up and protection of the river corridor, and improved public access with the overall theme "to create an integrated environment supporting both urban and rural patterns in appropriate locations."

Presently the Burlington Zoning Ordinance requires a shoreline setback of 50 feet outside the urban core. The zoning should be amended to require vegetative buffers or other erosion control techniques along our river and lake shorelines in areas outside the downtown waterfront. The City must at the same time insure public access through easements in places that will not harm the natural environment along shorelines.

STEEP SLOPES

Many areas throughout the city have steep slopes. Construction and loss of vegetation on these sites can erode the slope's stability and degrade water quality. After identifying affected areas, Burlington should consider implementing an ordinance limiting such development to preserve scenic quality and prevent unnecessary damage to shorelines or bodies of water from streambank erosion.

Areas along the north side of Riverside Avenue slope steeply down to the Winooski River - offering scenic views as well as the potential for passive recreation. The City should consider rezoning this area as open space, or seek public acquisition to protect the Winooski River corridor thus adding to a scenic natural greenbelt around Burlington. Several other areas of steep slope exist, including along North Avenue, and should be further defined.

THE INTERVALE

This unique flood plain, formed by the meanderings and seasonal flooding of the Winooski River, is presently used for farming and community gardens, conservation and education, power generation, and limited industrial activity. The Intervale contains Burlington's largest natural areas, best agricultural soil, and largest extent of undeveloped land. Mostly protected by Recreation, Conservation, Open Space (RCO) zoning, the Intervale continues to merit special attention.

In the spring of 1995, the Intervale Foundation developed a management plan for approximately 870 acres of Winooski River floodplain to define and protect the areas natural character and agricultural potential. The objectives of the Plan include enhancing agricultural productivity, protection of wildlife habitat, and management of the resource in the context of the ecological processes that shape it. The Intervale must continue to be protected for the purposes of conservation and open space, wildlife and scenic corridors, agricultural use and passive public recreation.

Natural Areas of Local Significance

There are discrete areas of particular sensitivity which are recognized for their highly significant functions and values. These areas must be protected from the impact of development. In addition to the obvious elements of water and air, Burlington has approximately 600 remaining acres of wetlands, supporting a variety of important functions. The Vermont Natural Heritage Program has identified 17 sites throughout the city which provide habitat for rare, threatened or endangered species. There are 676 acres of soils with high agricultural potential, primarily in the Burlington Intervale. The

urban forest includes the trees which grow in our backyards, along our streets, and in natural areas which support rich forest communities. Approximately 1,485 acres of forested lands (not including the trees in our backyards and greenbelts) remain in the city.

The Burlington Conservation Board, an advisory board to the Burlington Planning Commission, has established criteria to identify **Natural Areas of Local Significance**. These criteria are:

- wetlands as defined by the Federal Wetland Delineation Manual
- significant natural areas identified by the Vermont Natural Heritage Program
- undeveloped lands over one acre in size, with good or high potential agricultural soils
- sustainable forest community
- land containing critical habitat for migratory waterfowl, fish, and other wildlife
- shorelines of surface waters, to include the Winooski River, Lake Champlain, wetlands, tributaries, and natural drainage ways
- geological features of regional and state significance
- migration corridors that link natural communities
- outstanding natural features unique to Burlington
- any established natural site that provides valuable resources for education or has exceptional natural beauty

The City must protect these areas through full or partial acquisition, easements, rezoning, or increased development review. Protection strategies can also include tax incentives for privately owned natural areas, and securing private and public conservation grants to purchase land. Under the current property tax system, such an option however is not currently available.

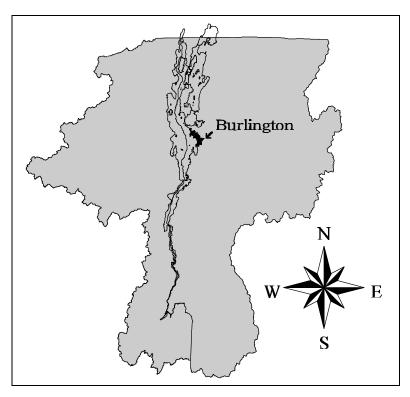
As Burlington continues to develop, remaining natural areas become more vulnerable to encroachment and their ecology more endangered. Presently the city has approximately 650 acres of natural area either publicly owned or permanently protected by easements. The City will work to retain a four-to-one ratio of developed land-to-protected natural areas in an effort to ensure that natural areas are protected as other land is developed. To offset new development, additional natural areas should be permanently protected by the City, State of Vermont, Winooski Valley Park District, the Nature Conservancy, or other conservation groups. For each four acres of new development, one acre should be set aside by the developer as a natural area.

To encourage additional protection, the City should develop a land conservation purchase program based on the value and vulnerability of natural areas of local and state significance. Areas protected through this program should remain primarily undisturbed; they should not be considered recreation parks, although pathways or trails might be appropriate in designated areas.

An Ecosystem Perspective

Lake Champlain and the Winooski River are two of the region's most valued resources. They provide extensive aquatic habitat, scenic beauty, recreation opportunities, even food, and drinking water. Lake Champlain provides our drinking water as well as that of several

neighboring communities. However, the lake and river are simply elements of a much larger and complex ecosystem including the Lake Champlain Basin, spanning 8,234 square miles; the 10 million acre Champlain Adirondack Biosphere Reserve designated by the United Nations in 1989; and, the 26 million acre Northern Forest stretching from Maine to the Tug Hill region of New York. For these and other reasons, many of our local activities must be considered within a much broader context.



Burlington discharges its Figure 18. treated wastewater and

Figure 18. Lake Champlain Basin

stormwater runoff into the lake and river. Presently Burlington is separating a portion of its storm and waste water to limit the amount of raw sewage discharged during heavy storm events. Upgraded treatment facilities will monitor phosphorus levels and improve water quality. Much of the city's stormwater runoff, however, continues to flow untreated into the lake and the river. As more and more of the city's land area is made impervious to water, the volume of runoff will increase, carrying car oil, road salt, household chemicals, and other toxins directly into the lake and river. To prevent this, the City must treat all stormwater runoff, as well as limit the use of hazardous substances on lawns and green areas.

At the same time, the long-term effects of increased boating and recreational uses on and along the lake remain unclear. The lake cannot indefinitely neutralize all the toxins, chemicals, and wastes discharged into it. Development up and down the lake will further degrade the quality of the water. Burlington must work with other lakefront municipalities to determine the recreational carrying capacity of this important body of water.

Besides protecting its lake, river and streams, the City must consider its ground water, that water that seeps into the earth through porous soils and cracks in the bedrock. Because Burlington gets its drinking water from the lake and not from wells, the City has given little consideration to groundwater. Yet both ground and lake water are part of the same water cycle, making it vital that Burlington protect the quality of both water resources. Hazardous waste sites, leaky underground storage tanks, and other disposal facilities can contaminate groundwater that eventually mingles with lake and river water.

Natural Environment Policy and Action Plan

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- Work toward a sustainable relationship with the natural environment.
- Protect its natural resources from degradation, including: air, water, soils, plant and animal life, agricultural lands, forests, geologic features, and scenic areas.
- Protect and preserve natural areas of local significance.
- Maintain or increase the existing ratio of publicly owned or permanently protected natural areas to developed land.
- Insure appropriate public access to natural areas.

ACTION PLAN

Action Items	Lead Agency
Short Term	5
Investigate design opportunities to utilize permeable surface materials in place of impermeable materials in new development and parking.	Planning and Zoning Public Works
Identify and map natural areas of local significance, including appropriate buffer areas.	Planning and Zoning
Identify and map areas of steep slopes.	Planning and Zoning
Develop a remediation and conservation plan for the Urban Reserve.	CEDO Planning & Zoning
Medium Term	
Implement measures to treat stormwater runoff from existing development, and require new development to treat stormwater through the use of acceptable best management practices	Planning & Zoning Public Works
Develop City policy to minimize the use of road salt	Planning & Zoning
on city streets as permitted by safety requirements	Public Works
Identify and map hazardous waste sites and	Planning & Zoning
underground storage tanks	Public Works
Long Term	
Development of source reduction programs.	Planning & Zoning Public Works
Protect all natural areas of local significance through land acquisition, conservation easements, zoning ordinances, appropriate management, and education efforts	Planning & Zoning
Implement a land conservation program and fund to purchase natural areas or easements, including adoption of a development impact fee dedicated to natural area purchases	Planning & Zoning Parks & Recreation
Support conservation organizations, including the Winooski Valley Park District in their conservation efforts and goals to educate the public about the value of wetlands, shorelines, and natural areas	Planning & Zoning Parks & Recreation
Work with other local, state, and regional groups on watershed policy and planning	Planning & Zoning







City of Burlington, VT 1996 Municipal Development Plan

State Courthouse



Wing Building



Howard Opera House

Burlington is a city that values its setting and traditions - it is human in scale, built for people and safe for walking.



Miller's Landmark

III. BUILT ENVIRONMENT

Vision Statement

Burlington is a city that values its setting and traditions - it is human in scale, built for people and safe for walking. The City reflects Vermont traditions of scale, design and character. Unique design characteristics and streetscape qualities in each neighborhood are retained. New construction and public investment reflect a respect for quality design. Buildings and facilities are accessible to people with disabilities. Streets are lined with shade trees. Street, transit, bicycle and pedestrian routes allow convenient access to all areas of the city. The City protects view corridors and scenic vistas. Areas of higher density are offset by open spaces, parks and natural areas. Building heights are in keeping with a city designed for people.

Burlington's **built environment** - it's buildings and structures, and how they relate to the city's landscapes, layout, and history - make Burlington the special place it is. The city has a rich architectural legacy that provides the foundation to its vital, human-scale environment. As Burlington continues to grow, we must conserve this legacy through careful planning. We must respect our scenic setting and serve our role as Vermont's largest city.

Respecting Our Natural Setting

With Lake Champlain and the Adirondacks to the west, the Green Mountains to the east, and the embrace of the Winooski River alone our northern boundary, Burlington is blessed with an outstanding setting. Throughout the city - at the end of streets, from parks, offices, and homes - significant views are provided of the lake, mountains, forested and natural areas, and prominent building landmarks. Burlington is in the fortunate position of being able to blend its urban amenities with a beautiful natural setting. The City must take full advantage of this setting by protecting view corridors and scenic views for all to enjoy - today and tomorrow.

Individual buildings must be respectful of the city's natural setting. While city ordinances allow for development at particular densities, design review regulations require that development consider the capacity and context of each individual site. Natural buffers and landscaping, including trees, shrubs and flower beds, should be used extensively to ease the transition between the built and natural form of the city.

A City Built for People

Burlington is a city built for people. Its buildings, streets, and layout are the right scale for people. To maintain this scale and character:

- Most buildings should be no taller than six stories.
- In higher density areas, buildings should be close to the street, with uses and entrances at the street level that invite pedestrian activity.
- Adequate green space and amenities should be provided to encourage people to be outside enjoying the city.
- People should be able to move safely and conveniently throughout the city on a network of sidewalks and paths.
- Streets should be easy for pedestrians to cross, with appropriate signals, signs, and crosswalks.
- Benches, trash and recycling containers, public phones, public rest rooms, information kiosks, public art and drinking fountains should be added to popular outdoor gathering spaces.
- Buildings and public amenities should be designed with Burlington's northern climate in mind.
- The massing and design of large development projects should be broken down so that buildings are visually compatible with the scale of their surroundings.

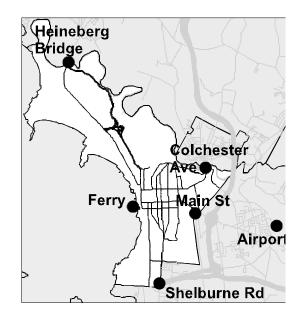
ADDING UP THE DETAILS

<u>Public:</u> The City's public investment in its infrastructure includes thousands of small details: street lighting, manhole covers, catch basins, curb and ramp details, sidewalk paving textures, street trees, utility lines, benches, fire alarm boxes and hydrants, traffic signs and signals, fencing, parking meters, and many more. The cumulative effect of these details, in conjunction with more substantial investments in public buildings, defines the standard of quality for Burlington's built environment. City officials need to recognize this role by requiring that public projects receive the same level of review for possible impacts on the built and natural environment that private projects receive.

Private: New construction and building renovation include numerous details that impact the design quality of the city. Gas, water and electric meters, electrical transformers, heating, ventilating and air conditioning equipment, refuse and recycling facilities and other service features can detract from a building's appearance if not properly located or screened. While the nature and purpose of such equipment imposes certain requirements on their location, these details are often added to a building at the end of the process - leaving few creative options. Whenever possible, these service features should be integrated into building and site design from the beginning so as not to distract from the quality of a building or its site.

GATEWAYS

"You never get a second chance to make a good first impression." Gateways create a sense of arrival for those entering the city or neighborhood within it, and set the tone for what's to come. This feeling can be created with appropriate signs and landmarks, plantings, burying utility lines, protecting important views, and using distinctive pavement and architectural elements at intersections. Each gateway to the city or its neighborhoods should reflect the particular characteristics of its setting and provide a welcoming introduction.



PUBLIC ART

Public art enhances the overall quality of the built environment. Examples of public art

Figure 19. Burlington's Gateways.

can be found throughout the city. Whether it is a mural on a downtown building wall, a sculpture in a park, or unique architectural details on a building, public art personalizes the city and offers seeds for conversation and contemplation. Public art also includes performance art. Street musicians, jugglers, dancers and magicians add vitality, activity, and a sense of community. Diverse offerings of public art should be encouraged and celebrated as distinctive elements of Burlington's quality of life.

CULTURAL FACILITIES

Cultural facilities for the visual and performing arts are an important aspect of Burlington's life and economy. From major events like the Discover Jazz Festival and First Night Burlington, to poetry readings at small coffee houses and paintings displayed in storefronts, the arts provide cultural vitality to the city as well as fulfill a growing economic niche. The Flynn Theater, with a seating capacity of 1,400, contributes over \$7 million to Burlington's economy each year. Memorial Auditorium, operated by the City, provides seating for 2,500 for concerts and sporting events. Several other small facilities are dispersed throughout the city and help make the arts a part of everyday life.

In addition to upgrading and maintaining existing facilities, additional performance and exhibition space will be needed to provide opportunities and affordable venues for artists. Needs include not only additional physical space, but also associated equipment and infrastructure necessary for existing facilities to ensure their viability.

Recent studies have identified the following needs:

- Continued improvements to Memorial Auditorium and the Flynn Theater.
- A small or mid-sized theater (less than 300 seats).
- Dance space for rehearsal and small performances.
- A medium to large multi-exhibit art gallery and exhibition space.

• Small gallery and exhibition spaces in the downtown and on the waterfront

The City should also investigate the best methods for linking important cultural facilities such as Memorial Auditorium, City Hall's Contois Auditorium, and the Flynn Theater along with related land uses such as restaurants and galleries. Improved linkages, whether in the form of a downtown cultural/arts district or simply a centrally-located arts information kiosk, would help bolster this important segment of the downtown economy.

BURLINGTON AS AN ACCESSIBLE CITY

To have equal opportunity, people with disabilities must have equal access to the built environment. Many people think accessibility refers only to wheelchair access. But it also includes access for people with sensory and other mobility impairments. Equal opportunity for people with disabilities means:

- doors that open easily
- ramps that are not too steep.
- signs at appropriate heights that are large enough to read.
- accessible parking spaces.
- accessible telephones.
- accessible transportation.
- convenient and accessible public rest rooms
- accessibility to the arts and cultural opportunities
- accessibility to the public decision-making process.

Burlington is committed to removing barriers within the built environment that hamper people with disabilities. This Plan proposes that the City establish a "disability-friendly" approach whereby new developments and building renovations, both public and private, are encouraged to go beyond the minimums established by regulation and pursue innovative ways to enhance convenience and accessibility for all residents with disabilities.

A NORTHERN CLIMATE

Burlington is a northern city, with frequent cold spells and large amounts of snow. While this is easy to remember in December or January, it can be lost sight of during warm and sunny summer days. It is important that buildings, court yards and public amenities (such as bus shelters) be designed to provide refuge from the elements and remain inviting year-round. Protection from wind, cold, rain, snow and ice should be important design considerations.

Mixed use districts, and the location of convenience stores and other local services close to residential neighborhoods, can also make life easier during the winter, especially for residents without an automobile. Priority must also be given to ensuring that snow and ice accumulation on sidewalks is cleared promptly.

Streetscape Design

One of the most important factors affecting the quality of urban life is the character of city streets. Crucial to a street's character are such things as building heights and setbacks, the planting of street trees, and the design quality of the "street furniture."

It is important to establish appropriate setback requirements for buildings. A uniform front and sideyard setback along a street creates a consistent building edge and a well-defined public space. For many years, the City through its zoning ordinance tried to create a more suburban street environment by requiring that buildings be set back up to 50 feet from the sidewalk even when this was not in keeping with the existing streetscape. These regulations were modified in the 1980's with the recognition that Burlington is an urban area and suburban regulations are not appropriate for the more densely developed sections of the city. This urban pattern should be reinforced by encouraging new buildings in commercial and higher density residential areas to be built closer to the sidewalk. Moreover, in industrial and commercial areas, off-street parking should not be allowed in front of buildings. In residential areas, the design of new developments should also consider the impact of garages and driveways on the streetscape.

The following approaches will improve the quality of the streetscape:

- New buildings or additions on any given street should be consistent with the predominant setback pattern for that street.
- Especially in downtown and commercial areas, setback requirements should reinforce an urban and pedestrian streetscape by being close to the sidewalk.
- Street-level store fronts and building entrances should be open and inviting to pedestrians, and service entrances, driveways and garages should be located on side streets or in service alleys.
- The scale and massing of buildings on any given street should be harmonious.
- Street width should be appropriate to the type and character of land uses found along the street.
- Where streets have more pavement than necessary, excess pavement should be replaced by green areas, sidewalks, or other appropriate public amenities.

STREETS AS PUBLIC PLACES

While not all streets can be as inviting and accessible to the public as the Church Street Marketplace, the pattern of streets, paths and pedestrian amenities should make walking safe and easy in all areas of the city. Residential and commercial areas should be active public places where social interactions are encouraged. People should be able to stroll, sit, pass through, look around, walk around, and enjoy neighborhoods, shopping areas, and natural areas. Increasing pedestrian activity improves business by increasing traffic passing by storefronts, improves public safety by placing more eyes on the street, and benefits our sense of community by facilitating communication and interactions between neighbors, business owners and visitors.

LOCATING UTILITIES

Overhead utilities - including electric, telephone and cable - present a dominant visual element throughout many parts of the city. This is especially concerning where street trees and other streetscape improvements are desired to make parts of the city more inviting for development and pedestrians or to preserve or enhance important viewsheds.

Many large trees have been radically pruned to accommodate power lines. Indeed, the vistas along many of our city streets are more strongly characterized by the march of utility lines than the promenade of trees. This is particularly unfortunate along streets such as Pearl and College that have important views of Lake Champlain.

While too expensive to accomplish everywhere, there are parts of the city where placing overhead utilities underground, or relocating them behind buildings, must be an important design consideration. In addition to all new development, priority should be given to the Downtown Waterfront, along streets that offer important view corridors to Lake Champlain, and the main approaches into the city.

STREET TREES

An essential feature of a healthy and attractive urban environment is the presence of treesalong the streets and in public parks and private yards. More than simply an aesthetic amenity, trees in the urban environment stabilize soils, provide a filter for surface runoff and air pollutants, shade summer sun, block winter winds, muffle sounds and provide habitat and refuge to birds and other small animals. The main objectives of Burlington's urban forestry program include maintaining existing public trees (numbering approximately 8,000) and planning for the creation of a sustainable urban forest through the City's tree planting program.

Sustaining Burlington's urban forest into the future will require a consensus regarding the goals and design objectives for the urban forest, and an understanding of the conditions necessary for a tree to survive in an urban environment. The Department of Parks and Recreation has begun the city's third street tree inventory. This effort should be an initial component to the development of an Urban Forest Master Plan. In addition to inventorying existing trees and assessing their condition, an Urban Forest Master Plan would articulate city-wide and neighborhood objectives for public trees, identify future planting sites, list appropriate species for re-planting, establish site planning guidelines, and explore opportunities and mechanisms for planting on private property to expand possible planting sites within the streetscape. To this end, a Third Century Tree Planting Fund should be established which would make a substantial commitment to Burlington's urban forest. This fund would protect and enhance the city's investment in its "green infrastructure"- currently valued at over \$4.5 million - and leave an important legacy well into the next century.

STREET AND SITE LIGHTING

Recent expansions in the use of exterior lighting has resulted in a marked increase in overall lighting levels within the city. While originally intended to reduce energy use and improve security, the use of high pressure sodium lighting - in combination with new styles of fixtures - has had several unintended results. These include a distortion of natural colors, excess brightness, glare spilling onto adjacent properties, and an obscuring of the night sky known as "sky glow" which affects not only Burlington, but neighboring communities as well.

Recognizing these issues are common in other areas, and pose impacts regionally, the City participated in a site lighting study in cooperation with the Chittenden County Regional Planning Commission. The purposes of the study were to develop information on lighting issues and technology, and to establish a set of lighting guidelines that will help Burlington and other communities in the review of new lighting installations. Issues of particular importance in Burlington include:

- Overall illumination levels are too high.
- Concern about the visual quality and color distorting properties of highpressure sodium lights.
- Glare from unshielded or misdirected fixtures.
- Unnecessary illumination of building facades.
- Design quality of fixtures and poles.
- Desire for complementary fixture designs in different types of settings and neighborhoods.

Recommendations resulting from this study - including the use of cut-off or shielded fixtures; lower wattage bulbs; color corrected or other acceptable light sources; and fixtures and pole heights which are appropriate for the site and neighborhood - will be evaluated for inclusion in the city's zoning guidelines and utilized by all city departments in the review of lighting installations.

Built Environment Policy and Action Plan

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- Retain its human scale and urban form.
- Protect its scenic views and view corridors, and encourage development that compliments its natural setting.
- Conserve the existing elements and design characteristics of it's neighborhoods.
- Encourage new land uses and housing designs that reflect changing demographics and new technologies where appropriate.
- Enhance the City's gateways and streetscapes.
- Protect, maintain and enhance the City's urban forest.
- Improve opportunities for pedestrian access and interaction throughout the city.
- Strengthen the City's role as a cultural and arts center, and support public art.
- Ensure people with disabilities have equal access to the built environment.
- Ensure building design and public amenities take into account Burlington's northern climate.

ACTION PLAN

Action Item	Lead Agency
Short	Term
Evaluate the Burlington subdivision	Planning & Zoning
regulations and street design standards to	Public Works
ensure that the width and design of each	Parks & Recreation
street fit its function and location.	
Modify the Zoning Ordinance's Design	Planning & Zoning
Review criteria to ensure building	
development take into account Burlington's	
northern climate	
Re-examine building height bonuses to	Planning & Zoning
ensure better consistency with the	
Municipal Development Plan vision and	
policies.	
Develop a comprehensive street lighting	Planning & Zoning
plan and site design standards.	BED
Develop an Urban Forest Master Plan to	Parks & Recreation
articulate city-wide and neighborhood	Planning & Zoning
objectives for public trees, establish	
comprehensive tree planting guidelines, and	
funding mechanisms.	N . 0.7 .
Reexamine the Zoning Ordinance to ensure	Planning & Zoning
existing views of Lake Champlain are	
protected to the maximum extent, especially	
from public parks.	Dlanging & Zaning
Inventory public art and cultural facilities in	
the downtown and on the waterfront. <i>Medium</i>	City Arts
Develop conceptual guidelines to define	
	Public Works
plantings, architectural landmarks and other	
design features.	Turks & Recreation
Define north/south and east/west mid-block	Planning & Zoning
pedestrian pathways connecting the Central	Public Works
Business District and the surrounding	Parks & Recreation
neighborhoods.	
Evaluate the feasibility of linking cultural	Planning & Zoning
facilities through the use of a downtown	City Arts
cultural /arts district or through a centrally-	
located arts information kiosk	

Long-Term	
Establish a Third-Century Tree Planting	Parks & Recreation
Fund.	
Develop a Percent-For-Arts Ordinance for	City Arts
public buildings.	
Evaluate the feasibility of using floor area	Planning & Zoning
ratio (FAR) as a measure of density beyond	
the CBD and Transitional Zones.	



1816: Unitarian Church

City of Burlington, VT 1996 Municipal Development Plan



1820: Winterbotham Estate



1885: Billings Library



1888: Ethan Allen Firehouse

Burlington has a rich and varied historic and architectural legacy, the result of more than two centuries of citizens' efforts to create and maintain a vital, human-scale environment for living and working.

IV. HISTORIC PRESERVATION

Vision Statement

Burlington's rich and varied historic and architectural legacy, the result of more than two centuries of citizen efforts to create and maintain, remains a vital, human-scale environment for living and working. The City has conserved its historic legacy through careful planning. Burlington residents, the business community, institutions, and local government respect and preserve historic sites and structures.

Burlington Inventory of Historic Resources

Burlington has a rich heritage, both recent and distant, documented in many archeologic, historic and architecturally significant places. Included are structures, districts, corridors, landscapes, sites and many other unique cultural environments found throughout Burlington. Many have been recognized on the National Register of Historic Places - included within 14 districts and 9 singularly nominated sites, the Vermont Historic Sites and Structures Survey, and the Burlington Inventory of Historic Resources (also referred to as the Burlington Register of Historic Resources.

In 1992, the first Burlington Inventory of Historic Resources was compiled which provided a comprehensive list of historic structures, sites, features, and districts. In order to be considered "historic," a structure must be more than old - it must also possess architectural merit, engineering merit, association with an important person or group, or with important events and patterns of history. The inventory serves three basic purposes.

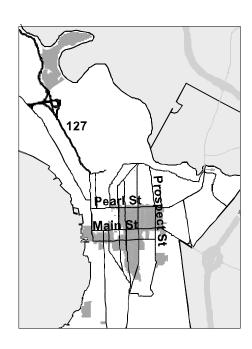


Figure 20. National Register of Historic Places: Districts and Sites.

- 1. Provides an important information base for educating the public about Burlington's heritage;
- 2. Allows property owners a reference point for making decisions about how to make appropriate improvements to their properties, without removing or obscuring important building details; and
- 3. Provides a factual basis for public officials to make informed decisions during the review of renovation proposals.

Not all sites however, have been identified, and each year new sites become eligible. The City must ensure that this inventory is updated regularly. As the inventory is revised over time, the evaluation process must continually be refined to ensure structures that are newly eligible for inclusion in this inventory are added when appropriate.

The City must protect historic sites and structures from unnecessary demolition or changes incompatible with their historic design. The City's design review criteria include a general heritage standard that applies to all buildings within Design Review Districts; and a set of more specific guidelines for structures within the Zoning Ordinance's Historic Buildings Article. Regardless of location, all historic buildings should be protected through reasonable regulation and an aggressive public education program. Where regulation is the chosen option, guidelines should be adopted to make the review process more understandable.

The City must also work with the private sector to promote preservation. For example, the Planning Commission can assist developers by providing information on preservation techniques and design strategies, and assistance in locating financing for eligible historic preservation projects. The City should continue to evaluate opportunities for creating a Historic Preservation Trust Fund, or providing no-interest or low-interest loans to help renovators achieve historically appropriate solutions.

Preservation and Neighborhoods

In addition to protecting historic structures, the City must conserve existing elements and design characteristics of its neighborhoods. These neighborhoods provide the context within which the importance of individual structures are defined. Working with residents and Neighborhood Planning Assemblies, the Planning Commission should work towards developing neighborhood conservation plans as the basis for future revitalization efforts.

The neighborhood conservation plan would identify important physical elements and design features, in addition to those noted as historic, and would define the physical characteristics worth protecting in each neighborhood, such as traditional building types, setbacks, street layout, lot size and coverage, landscaping and street details.

Preservation as an Economic Development Strategy

As Burlington adds to its inventory of restoration, adaptive reuse and appropriate renovation, it will become more obvious that preservation can be a very effective economic development strategy. The Ice House, Ethan Allen Fire House, the Rose Street Artists Co-op, the Maltex building and Bennington Potters North are successful adaptive reuses of existing buildings. Even the Community Boathouse was built on a recycled oil barge. Opportunities for the restoration and renovation of buildings can be found throughout the Central Business District, the Downtown Waterfront and the Old North End.

Perhaps the most striking example of using historic resources as part of an economic development strategy is the Church Street Marketplace. Here, design review and historic preservation strategies have been combined with pedestrian amenities to make this downtown shopping area one of the finest of its kind in the nation. The nomination of the Church Street Marketplace to the National Register of Historic Places should be considered. National Register designation offers certain tax benefits for income producing properties that can serve to enhance the viability of commercial districts in the city. Another opportunity for National Register nomination includes portions of North Street.

In addition, as the travel and tourism industry becomes a larger segment of the regional economy - currently one-fifth of the state's total economy - opportunities to promote heritage tourism should be explored. Examples include education and interpretation of the City's past through historic walking tours, brochures, events and signs.

To reinforce this economic development strategy, all policies of and projects undertaken by the City should enhance the City's historic resources and neighborhood characteristics. City policy should continue to support the innovative use of historic structures.

Preservation and the Enterprise Community

There are more than 2,300 buildings in the Old North End, many of which were built between the early 1800's through the mid-twentieth century. Approximately 800 structures - a little more than one third of the total - have been identified in the Burlington Inventory of Historic Resources as having national, state or local significance. It is estimated that at least half of the remaining buildings may be eligible for listing.

Some of the development strategies identified in the City's Enterprise Community application focus directly on historic preservation. The future vision statement about the built environment from that application says it succinctly:

"This is a community that values its setting and traditions. The residents and institutions of the Old North End Enterprise Community preserve their historic sites and structures. They conserve unique design elements, neighborhood characteristics, and streetscapes in each neighborhood, while ensuring that new construction meets these criteria."

Strategies designed to attain this vision range from surveying historic properties, National Historic District designation for portions of the Old North End - including the North Street Commercial District - and rehabilitation of neighborhood businesses and residences.

Of particular interest however, is the ability to restore and maintain historic structures while maintaining their affordability. The City must continue to pursue technical assistance

programs and revenue sources which enable the city to merge its historic preservation and housing affordability objectives.

The Importance of Archaeology

In Vermont, prehistoric remains consist mostly of Native American stone tools, flake debris from toolmaking, pottery pieces, burial ornaments, human bones, fire hearths and objects related to hearths. Archeologic sites represent activities of early American inhabitants from the period of contact to about 75 years ago. Development and redevelopment throughout many portions of the City have disturbed many of the potential sites for finding archaeological remains. Once disturbed from their original context, much of the archaeological value of an artifact is lost.

Burlington should protect its remaining archaeological resources. The presence of archaeological remains does not need to prevent development of a site however. Steps can be taken to insure that important remains are not disturbed. Often mitigation can be achieved simply through documentation rather than complete preservation. The Major Impact Development Ordinance requires that nonresidential developments of more than 15,000 square feet or residential developments of five or more units not have an undue adverse effect on archaeological sites. This ordinance should include smaller developments or site work at large projects that could disturb an archaeological site in sensitive portions of the city.

Historic Preservation Policy and Action Plan

CITY POLICIES

THE CITY OF BURLINGTON WILL....

- Protect its historic structures and resources.
- Conserve the existing elements and design of its established neighborhoods.
- Protect its archaeological resources.
- Educate its residents and visitors on the City's many architectural, archeological and historic sites and resources.

ACTION PLAN

Action Item	Lead Agency
Short	Term
Annually update the Burlington Inventory	Planning & Zoning
of Historic Resources (BIHR), a	
comprehensive listing of historic structures,	
districts, sites, objects, landscape features,	
and corridors that merit preservation.	
Develop criteria for listing new sites in the	Planning & Zoning
BIHR and for determining adverse effects	
of proposed development.	
Revise the owner notification process when	Planning & Zoning
adding properties to the BIHR.	
Provide technical assistance to property	Planning & Zoning
owners and developers on historic	
preservation techniques as well as	
identification of financing opportunities for	
eligible historic preservation projects.	
Establish a relationship with the National	Planning & Zoning
Main Street Center and Vermont	CEDO
Downtown Program to assist with the	
revitalization of North Street as a	
neighborhood commercial center.	
Work with the Vermont Division of	Planning & Zoning
Historic Preservation, Burlington	CEDO
Community & Economic Development	
Office and the Burlington Certified Local	
Government Program to facilitate	
compliance with Section 106 of the	
National Historic Preservation Act.	Diamina 0 Zanina
Prepare and submit a nomination for the	Planning & Zoning Markstylese
Church Street Marketplace as a National	Marketplace
Historic District.	

Medium Term		
Investigate the feasibility of a Historic		
Preservation Tax Stabilization Program.	g g	
Revise the Historic Buildings Article of the	Planning & Zoning	
Zoning Ordinance to include all National		
Register properties and establish criteria for		
determining which state historic structures		
should be included.	DI ' 0.77 '	
Develop a Historic Preservation Trust Fund.	Planning & Zoning	
Prepare and submit a nomination of one or	Planning & Zoning	
more ONE neighborhoods as a National	Flaming & Zoning	
Historic District.		
Develop a comprehensive public education	Planning & Zoning	
program focusing on the short-term and		
long-term benefits of historic preservation.		
Long-Term		
Expand the Major Impact Development	Planning & Zoning	
Ordinance to address significant		
archaeological resources.		
Identify neighborhood characteristics worth	Planning & Zoning	
preserving within the City.		
Develop neighborhood conservation plans	Planning & Zoning	
with community members.		



City of Burlington, VT 1996 Municipal Development Plan

Cherry Street CCTA Terminal



College Street Shuttle



Burlington International Airport

Burlington's transportation system stresses expanding alternatives to the automobile and making connections between various modes.



Lake Champlain Ferries

V. TRANSPORTATION SYSTEM PLAN

Vision Statement

Burlington maintains a diverse transportation system that is safe, affordable, efficient and accessible for residents and visitors alike. Land use and transportation policy decisions are considered in relation to one another, and the various modes are linked together as part of a system. The city is focused towards improving linkages between adjacent communities and neighborhoods, making the best use of existing infrastructure, and expanding alternatives to the single-occupant vehicle.

An effective transportation network is essential to moving people, goods, and services, and for the social and economic well-being of a community. Changes in Vermont's transportation system has had a profound effect - both positive and negative - on development trends over the course of the last century. A historic lack of access to the rest of New England has allowed the state to develop a distinctive culture, traditions and land use patterns that remain evident today. Access via Lake Champlain, and later by railroad, were instrumental to the early growth of Burlington as a major port through the late 1800's. The completion of the interstate highway spawned the development boom seen statewide through the 1970's and 80's by improving access from large urban centers. Today, Burlington is within a day's drive to over 70 million people.

Our society's embrace of the automobile has caused previous planning efforts to concentrate on expanding highway capacity. In recent years, however, the public has become increasingly concerned about the consequences of accommodating this unrelenting demand - on our communities, environment and pocketbooks. This sentiment is now reflected in federal legislation. The Intermodal Surface Transportation Efficiency Act (ISTEA), passed in 1991, closed the door on the interstate era and ushered in a period where choices and connections between transportation modes, and the containment of costs - financial, environmental and community - have become national priorities.

Burlington's priorities are based on the belief that Burlington's human scale and quality of life are not accidents, and need to be nurtured. In the context of transportation, this nurturing is best expressed:

- in a more balanced and efficient use of existing facilities;
- by considering land use and transportation decisions together;
- by enhancing pedestrian, bicycle and public transit opportunities and experiences as an alternatives to the single occupant vehicle;
- by sharing resources and facilities between uses; and,
- by strengthening connections between various modes of transportation.

This can only be accomplished by developing a "transportation system" that meet existing needs while paving the way for tomorrow's users.

Burlington also recognizes transportation as an economic issue - particularly for lower income residents. Many citizens do not have access to reliable private vehicles and are dependent on friends, public transit or taxis. Within the Old North End Enterprise Community, a majority of households are without cars. Without adequate or affordable transportation, these residents are at a disadvantage because they are restricted in where they can work, where their children go to daycare, or where they can shop. For this reason, the City is committed to meeting the needs of all residents - not simply those who can afford to own cars.

Regional Problems, Regional Solutions

Transportation is truly a regional issue. Much of Burlington's traffic is generated by neighboring communities - from commuters and visitors to the city and its many attractions. Very little traffic simply passes through on its way to another destination. At the same time however, significant commercial development continues at Burlington's borders creating concerns over maintaining access to downtown, through-traffic on neighborhood streets, and the viability of existing businesses along congested streets.

The Metropolitan Planning Organization (MPO), formed pursuant to federal legislation, is responsible for identifying and prioritizing future transportation needs, and allocating federal funds within a 9 community area. If regional transportation solutions are to be effective, priority must be given to more urban solutions which address associated land use issues and proportionately represent the citizens of Burlington. Techniques that provide alternatives to single occupant vehicles and suburban sprawl must be developed and implemented. Regional cooperation in transportation and land use planning will be essential to fulfilling the potential of both the city and it's neighbors in the future. Two concepts that are fundamental to this cooperation are (1) growth center planning, and (2) a regional multi-modal transportation system which places greater emphasis on public transportation.

Burlington will continue to serve as the region's commercial and business hub, providing opportunities and services to benefit the entire region. The key question for policy makers is how to improve access over the long term in a manner that is consistent with other community objectives. In order for the City to fulfill it's role as a regional growth center, Burlington must pursue policies designed to ensure: (1) convenient access to downtown; (2) a downtown environment that promotes walking and biking; and (3) that wasteful suburban sprawl is halted.

Cars, Congestion and Capacity

Each day approximately 120,000 vehicles travel in and out of Burlington: 29,000 over the Winooski River Bridge; 13,000 across the Heineberg Bridge; 42,000 via Main Street; and nearly 36,000 on Shelburne Street.

With no new highways contemplated, increases in future capacity can only be realized through greater system efficiencies, a balance of transportation modes and demand management strategies. Land use policies, educational programs that address the true cost of automobiles, and pricing strategies for parking will all influence future automobile use.

BURLINGTON'S GROWING TRAFFIC

As in many Northeastern cities, Burlington's streets were not designed move current levels of traffic. Statewide traffic grows about 2 percent a while Burlington year, annually area traffic increases by 4 to 5 percent adding an additional 4,000 trips per day in and out of the city. This figure does not include trips that are made totally within the city where nearly 59% of employed Burlington residents both live and work.

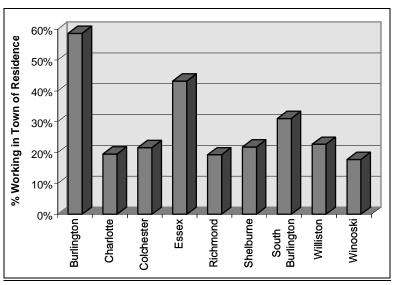


Figure 21. People Living and Working in Town of Residence.

Traffic patterns have also changed. Historically, people enter the city in the morning and leave in the evening making the journey to work the most significant portion of the traffic day. However, today non-work trips* make-up a larger proportion of all trips.

According to a survey of county residents by the Chittenden County Regional Planning Commission (CCRPC), almost 90 percent of all trips for all purposes were made by people driving cars. Slightly more than 5 percent were made as auto passengers, about 4 percent were walking trips, and fewer than 1 percent were bicycle or bus trips. Burlington residents make more trips by bus and by walking than residents of the county as a whole, but overwhelmingly people continue to drive cars ... alone.

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^{*} Non-work trips are typically errands to the grocery store, childcare, post office, etc.

STREET CLASSIFICATION

Burlington's streets serve two essential purposes: *access* to property or *mobility* between destinations. While many roads attempt to serve both functions at the same time, they can do neither well. For example, traffic will be slow on a street that has lots of driveways. (Access to property is high, but mobility is low) A limited-access highway on the other hand, such as the Winooski Valley Park Way (Northern Connector), provides a higher level of mobility but, by definition, offers little access to adjacent property.

To facilitate proper planning and decision-making, Burlington's streets are classified as *major*, *collector*, or *local* streets based on their function within the transportation network.

<u>Major Streets</u>: These streets provide the principal access routes from adjacent communities, and serve as primary connections between neighborhoods within the city. They provide mobility over access. Parking is permitted where feasible. Additional curb cuts are discouraged and only allowed where absolutely necessary. Major Streets also include *Arterials* - limited-access highways that move large volumes of traffic between major points within or outside the city.

<u>Collector</u> <u>Streets</u>: These streets gather traffic from local streets and feed it onto major streets. They attempt to balance access and mobility functions. Parking is permitted on collector streets where the entire way is not needed for the movement of traffic.

<u>Local Streets</u>: These streets provide direct access to adjacent property. They facilitate the movement of vehicles to and from collector or major streets. Parking, biking and other public uses of the street are encouraged. Through traffic on local streets is discouraged as are trucks, except those destined for local deliveries.

In Burlington, most streets are at least partially residential. The primary function of residential streets is to serve the land that abuts them. Yet many *function* as collector or major streets in the city's transportation network and are classified accordingly. Here a conflict may arise between the presence of moving vehicles and the quiet of a residential street. This is partly a function of the street grid originally laid out when Burlington was first platted. This grid is an important asset to the city's transportation system. It creates continuous thoroughfares and eases congestion by providing route choices and distributing traffic across a broader network. Burlington's grid network of streets will be maintained, and expanded whenever possible by linking dead-end streets. The challenge is to provide a system that balances access and mobility, that moves vehicles efficiently and restores a sense of community to neighborhoods.

In light of proposed Truck Routes and Traffic Calming policies, the Department of Public Works should re-examine the current street classification system to more accurately reflect street function and objectives, ensure continuity between streets of similar classification, and guarantee compatibility with state/federal functional classifications. Additionally,

street maintenance, pedestrian, bicycle, and public transit performance standards and objectives should be linked to the street classification system.

BURLINGTON ROADWAY IMPROVEMENT PROJECTS

Burlington's transportation system is in a state of transition. The 1991 Burlington Municipal Development Plan acknowledged that after the completion of three major roadway projects there would be no new highways constructed in Burlington's foreseeable future. These projects (Champlain Park Way, Main Street and Riverside Avenue) have since been delayed as a result of funding constraints and environmental concerns. These delays have provided an opportunity to reassess the effectiveness of these projects in meeting overall community objectives.

In contrast to earlier plans, this plan recognizes and articulates the multiple design and community objectives that must be considered in the evaluation of roadway projects. The matrix below outlines some of the more important considerations against which each roadway project will be measured:

ACCESS OBJECTIVES

- To Downtown
- To the Waterfront
- To the Industrial Corridor
- To Community Parks and Facilities
- To Other Transportation Modes

NEIGHBORHOOD OBJECTIVES

- Removal of Truck Traffic from Local Streets
- Removal of Commuter Traffic from Local Streets
- Provision of Safe and Convenient Pedestrian Routes
- Provision of Safe and Convenient Bicycle Routes
- Strong Linkages Within and Among Neighborhoods
- Integration of Traffic-Calming Techniques for Local Streets

DESIGN OBJECTIVES

- Roads that are appropriate in scale to Burlington and its neighborhoods
- Roads that are fully integrated into and designed as part of a multi-modal system including accommodations for transit
- High quality landscaping, lighting and amenities
- Underground utilities
- Cost effective solutions that meet local design standards

To the extent that community objectives are not met, the city may be faced with the challenge of "retrofitting" certain roadway projects, or portions thereof, in the years ahead; e.g. reducing lane widths, eliminating turning lanes, adding pedestrian amenities and medians, eliminating fencing and noise barriers, etc. Highway projects designed in the

1970's and 1980's may not be appropriate for Burlington as we approach the year 2000. The city must not be forced to accept a project design that is not responsive to Burlington's current needs. To the extent that current roadway designs emphasize the vehicle, and make pedestrian considerations an afterthought, the City will have to decide at what point it will undo the damage of earlier roadway designs, regardless of how well intentioned. This Plan reinforces the notion that a multi-modal approach, which encompasses a broad range of objectives, is the only practical and effective answer to the city's long-range transportation needs.

Champlain Park Way (Southern Connector)

The Champlain Park Way, often referred to as the "Southern Connector," was originally conceived and designed as an extension of the interstate highway to provide access into downtown Burlington and the waterfront. However, unanticipated problems associated with the Pine Street Barge Canal Superfund Site prevent the Champlain Park Way from being constructed as originally designed nearly 30 years ago. Delays in the cleanup of the Pine Street Barge Canal has forced a detour onto Lake and Pine Streets from the original alignment. While proposed as an "interim" solution, this route will likely remain in place for many years.

Another important development includes comprehensive changes in national, state and local transportation policy which emphasize the



Figure 22. Proposed Champlain Park Way.

importance of multi-modal transportation solutions, as well as the necessity to protect neighborhood and community character. The result has been efforts to improve and expand public transit, design solutions that are compatible with local objectives and character, and strategies seeking to relieve local streets from unnecessary truck and through traffic. At the state and local level, these new policies are being implemented with the proposed passenger rail service between Burlington and Charlotte, and the Truck Route and Traffic Calming initiatives within the city.

Redesign of the Champlain Park Way is necessary, and must therefore meet the following objectives:

- To remove trucks from residential streets and serve as a designated truck route. This should be augmented by passage of a Truck Routing Ordinance.
- To remove through traffic from residential streets by serving as an alternative route into the city. This should be augmented by development of a Traffic Calming Plan for the South End neighborhoods.

 To blend into adjacent residential neighborhoods with no more than 2 travel lanes, narrow lane widths, a low design speed and speed limits, sensitive streetscape design, and safe pedestrian crossings. Sound Barriers and fences should not be used in the new design.

Main Street Improvements

The Main Street Improvement Project, extending from South Prospect Street to the South Burlington boundary, has been designed to ease the current traffic bottleneck near the university, and provide a more even traffic flow in and out of downtown. The project must perform several functions and accommodate a multimodal solution addressing vehicular, pedestrian, transit, and bicycle needs; it must relieve adjacent streets of commuter traffic; it must be well designed; and function as an important gateway for the city and the university. This project is anticipated to begin in 1997.

Riverside Avenue

This project is intended to improve safety along this mixed commercial/residential corridor. There are several areas of concerns including bank stabilization and erosion along the north side of Riverside Avenue; traffic hazards associated with a curving roadway, undefined travel lanes, and extensive curb cuts; and pedestrian hazards due to excessive speeds and the lack of pedestrian signals and crosswalks.

This roadway also functions as a major gateway into the city from the northeast, and its visual quality needs significant upgrading. The design process for the roadway has involved extensive input from local residents and property owners. Principal considerations in this process have included drainage and bicycles. Any changes in the final design must continue to address these concerns.

Waterfront Infrastructure

Infrastructure improvements to Lake Street have long been cited as the key to further waterfront development. The City has begun assembling the necessary funding. Design of this roadway project will address waterfront traffic, parking issues, and provide necessary linkages to the Church Street Marketplace and the remainder of downtown. Improvements associated with Lake Street also include relocation and improvements to electric, water and sewer utilities.

Truck Routes

While no one wants trucks on *their* street, we all recognize the important role trucks play in serving residents and businesses in the city. In order to limit their presence on neighborhood streets, the Dept. of Public Works has begun to identify important truck routes within the city. Once finalized, trucks over a certain size will be limited to designated "truck routes." Signs, education and enforcement will be combined with traffic calming methods to keep unnecessary truck traffic off local streets.

Traffic Calming

Streets are public places for many activities and functions places of landscaped vistas, trees, and shrubs; paths for walking; places for talking and playing; right-of-ways for utilities; and routes for the movement, stopping, and parking of vehicles. Residents continue to support streets that provide for diversity of activities and functions. However, past practices and roadway designs have favored a single use: motor vehicles. While this may be acceptable on limited-access highways, it is clearly not on local streets.

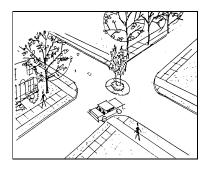


Figure 23. Traffic Calming Techniques: Traffic Circle.

Traffic Calming is an important strategy for returning

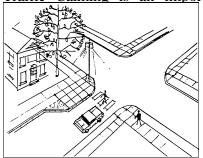


Figure 24. Traffic Calming Techniques: Neckdown.

streets to residents, encouraging other uses, improving safety and limiting the impact of busy streets on adjacent land uses. Traffic entering a calmed area may be slowed by physical barriers or a change in pavement texture. The intent is to affect driver behavior and expectations - causing vehicles to slow down and adopt a more pedestrian-friendly behavior. Parts of the street are often reclaimed for pedestrian activities or landscaping. Making a street one-way or blocking lanes can also protect a local street from through traffic. Traffic-calming will help keep through traffic off residential streets, and make collectors quieter, more friendly for bicycles and easier to cross for pedestrians.

Although primarily for local streets, traffic calming techniques can be used on collector and major streets to enhance both safety and the quality of life on these streets. Shade trees can buffer homes from the streets. Sidewalks can be widened and bicycle lanes added where safe and appropriate. Street entrances can be narrowed and brick crosswalks added. These improvements can also be used to soften the traffic-residential conflict. The key component of any traffic calming program will be neighborhood support.

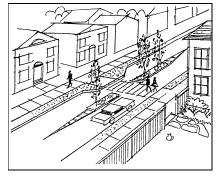


Figure 25. Traffic Calming Techniques: Mid-Block Pedestrian Crossing.

PARKING IS A TRANSPORTATION PROBLEM

Parking downtown and on the waterfront continues to be a conundrum. Burlington competes with the auto-dominated suburbs - where land is relatively inexpensive and the cost of parking negligible. Structured parking is expensive to build; expensive to use; and encourages the continued dominance of cars in the city. Yet providing some parking is necessary to the economic well being of the city. Downtown, the Hill Section and the Downtown Waterfront continue to face the challenge of providing accessible, reasonably

priced parking to attract visitors and workers. Demands for structured parking increase not only with rising traffic volumes, but also with increases in resident-only parking.

A study commissioned by the MPO in 1993 indicated that there was a sufficient parking supply to meet the needs of both long term and short term parkers, but that the supply was not affordable for downtown workers. Better management of existing facilities, providing alternative modes for commuting, and development of remote parking facilities are all options for serving workers and visitors at an affordable price. The creation of a Downtown Transportation Management Association - similar to CATMA - to plan, coordinate and manage parking resources among major employers downtown should be evaluated.

Techniques to lessen the demand for additional parking include changing the number of parking spaces required by the zoning ordinance from a minimum to a maximum - in effect limiting the number of parking spaces a developer can provide. The Parking and Mass-Transit Capital Fund must also be made a more attractive alternative to developers in lieu of new parking spaces. Two other demand management approaches include a cash out of monthly parking where businesses providing parking to their employees offer the cash equivalent value of those spaces as an alternative, and creating a flexible payment medium that can be used at any facility, parking or transit, and subsidized by the private sector, to reduce the demand for high priced parking and lessen the expense to the user.

The City currently has a Residential Parking Program where neighborhoods can petition to designate on-street parking for the use of residents only. While some areas have made use of this program, it has not been widely used as a downtown parking management tool. This program should be reviewed for its effectiveness, and revised as necessary.

Stressing Other Modes of Travel

Intermodalism/Multimodalism† have become the latest buzz words in the transportation jargon. The past five years have seen the development of a greater diversity of travel options within the city. These include the College Street Shuttle between the hospital and university, downtown and the waterfront; incorporation of transportation planning activities within the Department of Public Works; recognition of bicycles as legitimate means of transportation; and pursuit of pedestrian enhancements through the proposed Traffic Calming Program. All reflect a broadening of transportation alternatives within Burlington.

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[†] **Intermodalism** refers to making connections, or linkages, <u>between</u> various modes of transportation. **Multimodalism** refers to providing <u>a range</u> of transportation options (e.g. buses, cars, carpools, bikes, walking, etc.)

In order to be most effective, all modes of transportation must be integrated as part of a *transportation system* - motorist to transit, bicycle to transit, motorist to pedestrian, etc.. Transitions between modes must be smooth and convenient, and the design of new development and transportation facilities should facilitate this transition. The concept is one of a "mobility system." that is not simply roads, buses or bikeways, but the essence of the functions they serve. A mobility system also includes land use policies that enable people to live close to work, shopping and entertainment, and the design of system components (i.e. roads, transit systems, sidewalks, etc.) that are sensitive to the needs of the community - highways that facilitate mobility, not create single-use barriers within a community; transit vehicles that are welcome in neighborhoods, not viewed as intruders; and amenities that serve the user, not just the engineer or transit operator.

PUBLIC TRANSPORTATION

Public transportation is perhaps the single most important emphasis for a future transportation system that will serve the city and region. While public transit will never dominate automobile use, it does offer the greatest opportunity for improved efficiency and mobility. Public transportation includes fixed-route and demand-response bus service, shuttles, taxis, ferries, and commuter and passenger rail. The advantage of public transportation is that more people can be served for fewer dollars. This means less traffic, fewer highways, cleaner air, safer travel, less space devoted to parking and greater opportunities for lower income residents.

The MPO's Draft Long Range Regional Transportation Plan calls for a tenfold increase in the use of public transportation over the next twenty years. As the regional growth center, Burlington will be the origin or destination for a majority of those trips. The dense settlement pattern of Burlington's older neighborhoods, and proximity of the North End and South End neighborhoods, offer opportunities for higher frequency service within the city. Nearby suburban and rural communities will support express and commuter, or reverse commute, services between growth centers. One size does not fit all however. Varied service approaches and new funding mechanisms must be developed to make an expanded regional public transit system a reality.

Public transportation is expensive in the short-term. In this era of fiscal restraint, new expenditures in transportation infrastructure must be closely examined. We must make the best use of existing capacity, and make choices that will serve us best over the long-term. We must exploit those opportunities where investment in transit is a wiser use of public and private funds than continuing exclusive investment in facilities that serve predominantly the automobile. For this to be effective, the private sector must be a partner, both philosophically and financially, and service providers must be responsive to changing needs during this time of transition.

Public transit often suffers in matters of convenience when compared to automobile use. Taking transit may mean a longer trip due to longer headways[‡], traffic and scheduling. In addition, many trips are linked - meaning it may involve stopping at more that one location along the way. A typical example is grocery shopping and picking-up children on your way home from work. Burlington's climate offers another deterrent to greater use of public transit as most bus stops are unsheltered from cold winds, provide few amenities and offer little information. None of these factors, however should be seen as reasons not to aggressively promote public transportation. They are simply realities that must be accommodated in system planning and design.

If we are to capture a greater percentage of trips with public transit, the comfort and convenience of the user must be the guiding principle. Users must know where and when they can access the service - before ever getting on. Transit must be made convenient and economical if it is compete effectively with the car. Travelers should be confronted with no more than one mode shift (e.g. car to bus, or train to bus), or transfer, in their journey whenever possible. At the same time, we must never lose sight of public transit's true objective: to take people where they need to go, when they need to get there. For many transit dependent users, it is not a question of convenience, but of necessity.

Buses

The City of Burlington is currently served by four types of transit services. These include:

- Chittenden County Transportation Authority (CCTA) which provides a regional fixed-route service including 4 routes entirely within Burlington;
- Special Services Transportation Agency (SSTA) which provides a demand-response service within Chittenden County for area human service agencies;
- Campus Area Transportation Service (CATS)) which provides a fixed-route service within the UVM Campus; and,
- Vermont Transit (VT) which provides inter-city bus service throughout Vermont and New England.

Burlington residents have consistently lobbied for a bus system at a more intimate scale; one that is easy to use and does not disrupt neighborhoods; one that provides and maintains amenities such as shelters and benches where appropriate. Residents have also cited frequency of service and length of the service day as inadequate to meet their needs. Current funding arrangements for CCTA make it difficult to provide new services, expand current services, or to offer reduced or free fares as a tool to increase ridership. Burlington must explore alternative funding scenarios and programming techniques with CCTA to make the system more flexible and to better serve the ridership.

The College Street Shuttle, operated by CCTA, has proven to be a successful experiment with monthly ridership averaging 20,000 trips. Much of the attractiveness of the shuttle can be attributed to its ease of use, its central and accessible route, and its cost - free. Continued, and expanded, service of the College Street Shuttle is a high priority. Service

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[‡] Headways refers to the frequency of service. (e.g. a bus every 20 minutes)

expansion can be accomplished through working partnerships, and establishing new connections including the proposed Charlotte to Burlington Passenger Rail Project. A creative array of funding mechanisms will be necessary to ensure the future stability of this important transportation link. There is also the opportunity to learn from other shuttling experiences such as the CATS system at UVM and special event shuttling such as First Night, Fourth of July and baseball at Centennial Field to expand the use of similar services.

Passenger Rail

Burlington is fortunate to have access to an active rail line. While currently used exclusively for freight and tourist excursions, the Vermont Agency of Transportation anticipates beginning a demonstration commuter rail service between Burlington and Charlotte as early as the fall of 1997. This service is planned to coincide with scheduled improvements to Shelburne Road/US Route 7. While concerns remain regarding noise in adjacent neighborhoods and safety at rail crossing, Burlington has voiced its support for the project as an expansion of public transportation serving the city and an improved use of existing transportation infrastructure. Also under consideration in this rail corridor is a proposed Amtrak "Ethan Allen" route along the eastern shore of Lake Champlain that would improve Vermont service to New York. While preliminarily routed to Rutland, this service should be extended to include Burlington in the near future.

Both of these proposed passenger rail services provide important access into Burlington - making use of existing infrastructure and without the need for additional cars. As these plans come to fruition, other transportation connections must be made including those with fixed-route transit, shuttles, inter-city bus, and bicycle and pedestrian routes within the city. The key to the success of these rail projects will be how well they are integrated within the overall transportation system to maximize their ease of use and minimize the need to bring additional automobiles into the city.

Ferry Service

Burlington is served during the spring, summer and fall by ferry service to Port Kent, New York operated by the Lake Champlain Transportation Co. (LCT). In addition, a small water shuttle business began operations in the summer of 1995. Both types of service provide opportunities to decrease traffic congestion in the city where they can provide an alternative to bringing your car. This is especially true for commuters and visitors from the New York side whose primary destination is Burlington, or a neighboring community conveniently linked by another form of public transportation. Once again, it is important that these services are well integrated with the entire transportation system.

WATERFRONT TRANSPORTATION CENTER

Critical to attracting private investment to the Downtown Waterfront, and tied to the discussion of parking and multi-modal transportation, is the development of a multi-modal transportation center which can provide parking; intermodal connections for ferry, bus, commuter- and passenger-rail users; facilities for shuttles, inter- and intra-city transit, and bicycle facilities. Such a facility will not only serve to co-locate several modes of public

transportation, but also to provide ancillary support services such as information, lockers and showers.

A recent study describes a "Transportation Center District" extending on both the east and west sides of Battery Street between Main and College Street. The project is envisioned as a public-private mixed-use development providing various multi-modal connections, and linkages among these functions to the rest of the city. The benefits of a "transportation district" must be carefully examined to ensure that this approach does not detract from the convenience of a central downtown bus transfer location or overburden the waterfront area with unnecessary parking. In addition, any such district and related facilities must be planned in such a way so as not to cause a major increase in traffic and demand for parking - the result of which would make the waterfront less accessible to pedestrians from the downtown core.

PARK AND RIDE

Peak hour traffic in and out of Burlington is comprised mainly of commuters. Park and ride lots along Interstate 89 have proven to be successful transfer points for car and van pools - reducing congestion on Burlington's roadways and parking system, and improving access to downtown. Various studies have identified sites for park and ride lots throughout the county that could serve commuters into downtown Burlington and other destinations in the region. These studies have recommended instituting a regional park and ride program with the overall goal of fostering the construction of commuter lots throughout the county so that dispersed populations can be served by rideshare, shuttles, vanpool, bus or other forms of "mass" transportation. Burlington supports development of commuter park and ride lots throughout the region, and will promote their implementation on the regional level.

Of particular interest is the potential for developing park and ride, or "commuter capture," lots at the outskirts of the city. As conceived, commuters and visitors could leave their cars outside of the city and enter via bicycle or public transportation - bus or rail. One location under discussion is near the Lockheed-Martin facility in the south end. Other locations to the east and north of the city should also be considered. The private sector must participate in these efforts and provide incentives to their employees to use such facilities

BICYCLES

Bicycles continue to play an increasing role in reducing auto dependence and improving the livability of the city. While bicycling may not be an option every day, properly designed and maintained bicycle facilities, coupled with a well developed education and enforcement program, can provide a reasonable reduction in the use of cars.

It is the City's policy to develop enhancements for this mode of travel whenever possible. Currently the Dept. of Public Works commits 2% of its Streets and Sidewalks Capital Budget to develop and enhance the bicycle transportation network. Improvements include both the expansion of the Class 1 Bike Path network associated with the Burlington Bike

Path, and "in the road" options such as Class II Bike Lanes and Class III Bike Routes. The City is committed to making connections with similar routes and facilities in neighboring communities as discussed in the Regional Alternative Paths Plan.

Choices for future bicycle facilities cannot be an either/or decision. In-the-road options typically serve the experienced cyclist and dedicated commuter, and offer a shared use of existing roadways. "Share the Road" is the philosophical expression of this commitment. Lanes and routes must be adequately marked in order to give notice to drivers that they should expect to encounter bikes on this road. In contrast, Bike Paths better accommodate users such as children and visitors who are less confident and experienced. These paths serve to provide safer access to destinations frequented primarily by children such as schools, and have proven an important economic development tool for the city. Lastly, bike paths are also used by commuting cyclists when they represent the shortest route to a particular destination.

Future improvements must include amenities such as secure and sheltered bike parking; showers and lockers; bike racks on public transit vehicles; and the development of a North/South bicycle link through the downtown, an east/west link across the New North End, and a route along the Winooski River. While we like to "encourage" a greater use of bicycles, our standard measures of performance are solely vehicle-based. In order to measure the sufficiency of our existing and future transportation system to accommodate all modes, the City will develop Level of Service (LOS) standards for bicycles and pedestrians.

Residents have repeatedly expressed their concern that there is a general lack of understanding as to the rights and responsibilities of cyclists and pedestrians. If we are to have a multimodal transportation system that shares resources among users, education, marketing and enforcement must be a central component to the city's overall program.

PEDESTRIAN SAFETY AND ACCESS

Burlington continues to make gradual improvements to its pedestrian infrastructure. A study of pedestrian improvements recommended five areas for improvements designed to overcome deficiencies in the pedestrian network. In response, the past five years have seen the addition of new sidewalks, pedestrian signals, ADA-compliant ramps, a reduction of excessive pavement widths by reducing curb radii and an aggressive crosswalk striping program. As with bicycles, in order to measure the sufficiency of our existing and future transportation system to accommodate all modes, the City will develop Level of Service (LOS) standards for pedestrians.

The city is entering into an ambitious Traffic Calming Program whose goal is to return neighborhood streets to residents, offer more balanced use of public streets, and reduce the dominating influence of motor vehicles - all with the effect of improving the pedestrian experience. Residents have been vocal in their call for pedestrian education and, where necessary, enforcement programs. In addition, a pilot program to make "pedestrian-

friendly" improvements throughout the downtown through improved signals, and crossing markings and materials will be tested.

Access to Schools

Areas around elementary and middle schools have become increasingly congested with traffic from parents transporting children to and from school. This creates a cycle of dependence on motor vehicles to transport children as parents' concern for their children's safety grows along with more traffic and congestion. Burlington has conscientiously maintained its neighborhood schools, and wisely taken advantage of the public transportation system for middle and secondary students as well as those elementary students with a long walk.

In addition, the City continues to encourage a land use pattern where residential areas are within walking distance of neighborhood services. While each situation poses a different set of design problems, there are many similarities. Each school should be connected with adjacent neighborhoods by a network of sidewalks, bicycle and pedestrian paths, and foot trails to provide safe and convenient access for school children. City departments will continue to work with individual schools and PTO's to address these issues.

Stairway Streets

The Waterfront must be accessible from all approaches, and there should be no need to use a car. The *Stairway Streets Study* addressed pedestrian access to the waterfront from the adjoining neighborhoods and the downtown. It's conclusions call for the development of several ADA compliant pedestrian access points. These will require considerable investment to implement but play a significant role in making the linkages to the waterfront discussed in other areas of this Plan.. Upon the completion of Lake Street improvements and the Transportation Center, Burlington will pursue funding to implement a Stairway Streets Program to improve waterfront access for pedestrians.

TAXI CABS

At present taxi cabs are an underutilized transportation asset. Ordinance changes allowing for greater flexibility in shared ride opportunities and potential new markets for operators have not been explored, but remain a potentially untapped capacity. Similarly, the use of off-hour capacity for reverse commutes remains a possibility.

The number of taxi cabs has grown over the past few years as have the fares, making the traditional taxi cab ride an expensive proposition. There may be latent capacity available within the existing taxi service. Activities funded through the Enterprise Community grant will explore this issue in the neighborhoods of the Old North End and identify those services which can be reasonably replicated in other areas of the city. The infrastructure we develop will have to be efficient at providing for diverse multi-modal needs, as well as meeting the needs of all residents.

COMMERCIAL GOODS MOVEMENT

Both Vermont Railway and New England Central Railroad ship freight through Burlington. Intermodal freight connections should be developed as rail reduces the number of trucks on our roads and in our neighborhoods, and lessens maintenance costs for highways. The use of rail in moving freight is of great importance and needs to be promoted - but not at the expense of our neighborhoods. It would be contrary to the priorities of this Plan to locate these types of facilities where they would unduly impact residential neighborhoods. Burlington will work regionally, and with the railroads, to develop appropriate facilities to serve the city and the region.

BURLINGTON INTERNATIONAL AIRPORT

Burlington International Airport (BIA), owned by the City of Burlington and located in the City of South Burlington, is one of the busiest airports in New England and serves as an essential gateway to the region. The airport serves scheduled domestic and international service on commercial carriers, general aviation, air freight and military operations by the Vermont Air National Guard.

Burlington's airport service is a dominant factor in the area's economic advantage, and weighs heavily in the city and region's future economic development potential. Assuring adequate access to the airport in the future will be a critical component in fulfillment of the objectives of this Plan. BIA must be fully incorporated into a regional transportation system, with well-established linkages between other modes and facilities.

TRANSPORTATION DEMAND MANAGEMENT

Along with practices to design and manage a transportation system, programs that lessen the demand on this system will ease congestion. Transportation demand management (TDM) options such as ridesharing and vanpooling can decrease vehicle miles traveled. Other options to cut rush hour traffic include staggered work hours, compressing the work week from five to four days and telecommuting.

Suburban land use patterns encourage increased use of automobiles. But urban neighborhoods that have necessary services, housing, and jobs would encourage people to walk instead. Higher residential density downtown and at points on public transit routes could help to increase the use of public transportation. For more, see the *Land Use Section* of this Plan.

INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) are being developed across the county using advanced technologies to improve the efficiency of transportation systems. Much work has been done with electronic fare systems, geographic information systems and satellite location technologies that, when integrated with other systems, can improve service delivery, increase market share and address long standing issues of headways. The City should work with area transit providers to explore the feasibility of deploying ITS.

Conclusion

As Burlington's transportation system evolves, we need to expand our focus beyond the traditional view of transportation as a facilities-based industry (concerned with buses, trains, taxis, etc.) and place greater emphasis on the needs of the user and community at large. We must enhance the existing fixed-route network with a range of non-traditional services, weaving the two together to create a "public mobility system". Together, with sensitively designed facilities for vehicles and pedestrians, this system can significantly improve the quality of life and economic prosperity of Burlington by providing more effective transportation services and an enhanced setting for social interaction, business activities, and community life in general.

Partnerships

Partnerships are crucial to the execution of this Plan. Whether joint development projects, transportation management associations or merchant sponsored transportation programs, partnerships offer flexibility and additional resources to the pursuit of city goals. At present, key transportation partnerships involve the Metropolitan Planning Organization (MPO), Campus Area Transportation Management Association (CATMA), the Chittenden County Transportation Authority (CCTA), Bus/Park, the Burlington Transportation and Parking Council, and an emerging partnership coalescing around the College Street Shuttle. Development of auto-capture lots on the outskirts of the city, better cooperation and management of parking resources within the downtown and expanded shuttle service will all require extensive participation and commitment from Burlington employers, neighboring communities and city government.

Financial Capacity

The transition to a diverse, multi-modal transportation system and the eventual blossoming of that system will require new funding mechanisms. Reliance on the local property tax is inadequate for present levels of service - let alone to address an ambitious expansion. As we plan for new transportation services, methods of financing must be identified.

Transportation Policy and Action Plan

TRANSPORTATION POLICIES

THE CITY OF BURLINGTON WILL...

- Focus on the User
- Address Community-Level Needs
- Offer Diversity of Choices
- Build Upon Existing Resources
- Implement Coordinated Policies

TO FURTHER THESE POLICIES, BURLINGTON WILL ADOPT THREE INTERRELATED STRATEGIES...

Mobility Strategy

To make the transition from an auto-centric system to a multi-modal system, public, private and non-profit providers of transportation services will incorporate the following policies:

- Focus on the Consumer
- Use Technology to Improve Service and Coordination
- Expand Availability of Alternative Services
- Develop New Institutional Structures
- Promote Transportation Demand Management
- Encourage Greater Public Participation

Design Strategies

Transportation design has focused almost exclusively on the automobile to the detriment of pedestrians, cyclists, transit users and the community at large. We propose a balanced multi-user approach to transportation design:

- Modify Roadway Design to Meet Needs of All Users
- Integrate Roadway Design with Surrounding Land Uses
- Promote the Use of Traffic Calming Techniques
- Promote Pedestrian and Bicycling Facilities
- Enhance Design and Maintenance of Transit Facilities

Land Use Strategies

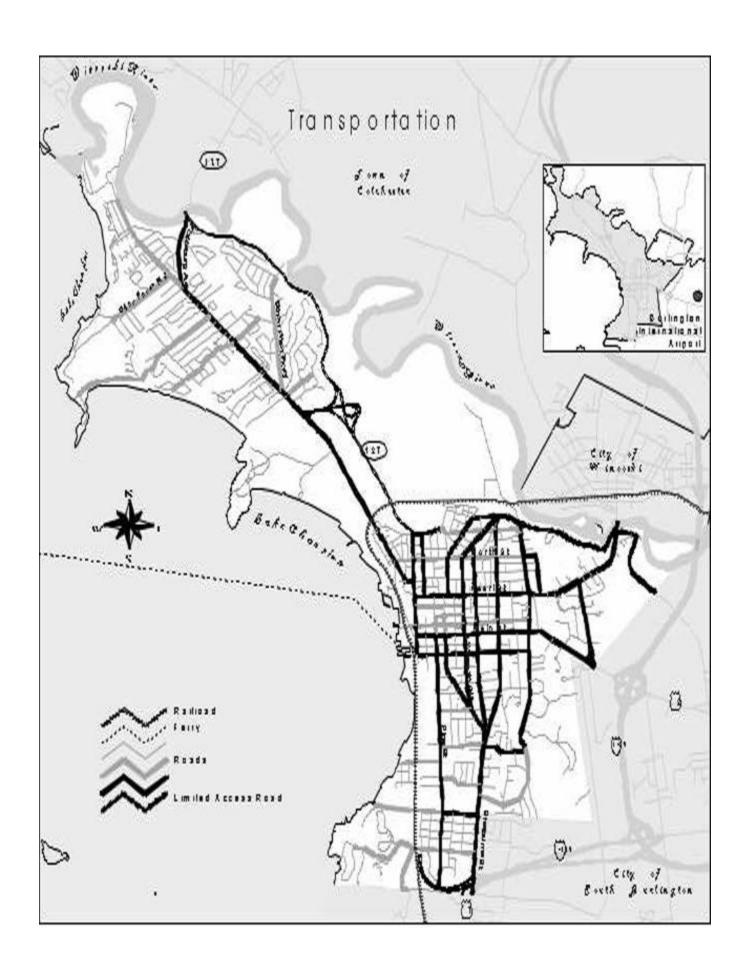
Transportation affects land use patterns, and land-use policies influence transportation. The following strategies are recommended to improve the relationship between the two:

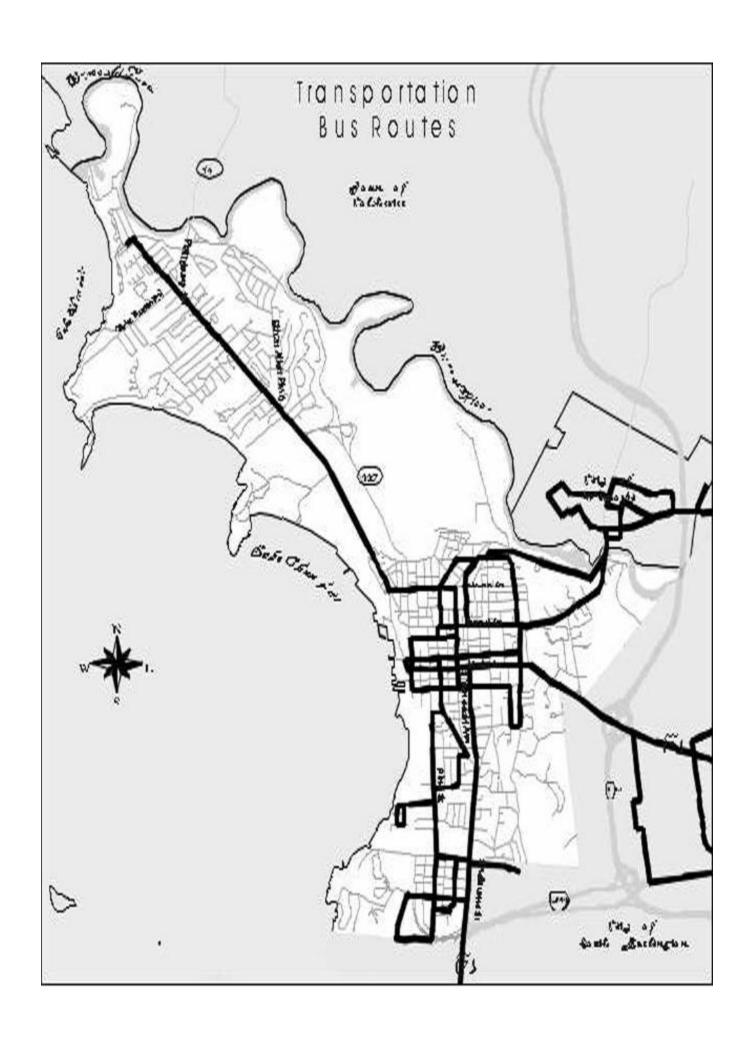
- Promote Transit Oriented Development (TOD)
- Support Growth Management polices.

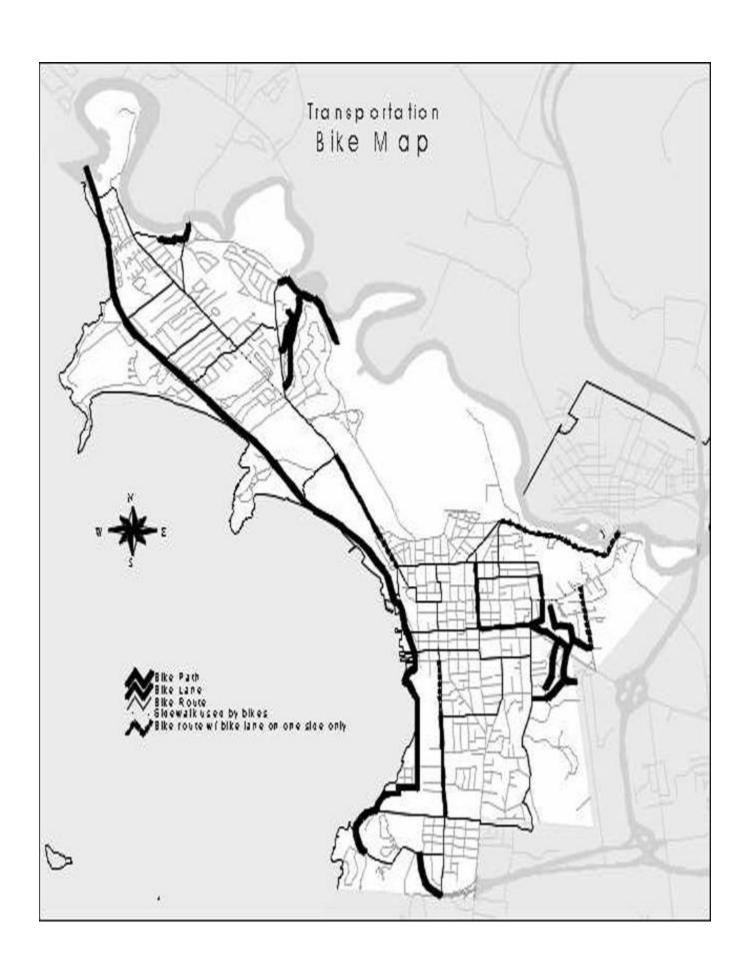
TRANSPORTATION ACTION PLAN

Action Item	Lead Agency
Short-Term	-
Evaluate the current design of the Champlain Park Way	Public Works
with regard to community and neighborhood design	Planning & Zoning
objectives.	
Continue Transportation Demand Management Programs	Public Works
initiated by Downtown Bound.	
Work with CCTA to shorten headways of existing routes -	Public Works
especially in the New North End.	
Continue and expand the College Street Shuttle connecting	Public Works
the university, hospital, downtown, and waterfront.	
Improve incentives to use the Parking & Mass-Transit	Planning & Zoning
Capital Fund as an alternative to on-site parking	
Develop long-term funding mechanisms for the College	Public Works
Street Shuttle	
Develop a Traffic Calming Program for residential and	Public Works
commercial areas within the City.	Planning & Zoning
Develop Level of Service (LOS) standards for bicycles and	Public Works
pedestrians.	Planning & Zoning
Begin evaluation of a Multi-Modal Transportation District	Public Works
in the vicinity of Battery Street.	
Begin implementation of a Waterfront Transportation	Public Works
Center at Union Station.	
Incorporate bike racks on all public transportation vehicles	Public Works
and facilities.	
Develop and implement a Bicycle and Pedestrian Safety	Public Works
Education Program.	Police Department
Develop a bicycle and pedestrian hazards reporting	Public Works
program	
Pursue connections into Colchester for the Burlington Bike	Public Works
Path.	Parks & Recreation
Develop and implement a Truck Route Plan to encourage	Public Works
freight shipments to use appropriately designated routes in	
the city.	
Coordinate the use of downtown parking lots for off-peak	Public Works
nighttime parking.	
Initiate Main Street Improvements.	Public Works
Complete Lake Street Improvements.	Public Works
Advocate strategies to ensure Chittenden County	Public Works
transportation projects are consistent with the goal of	Planning & Zoning
limiting sprawl.	
Initiate Riverside Avenue improvements.	Public Works

Change the downtown minimum parking requirement to a	Planning & Zoning	
maximum.		
Medium Term		
Determine the remaining highway network capacity, and	Public Works	
calculate the amount of traffic each new development can		
add to the road system.		
Develop Stairway Streets to link the waterfront with the	Public Works	
downtown and adjacent neighborhoods.	CEDO	
Develop an East-West Bike Path across the New North	Parks & Recreation	
End.	Public Works	
Complete the Northern Connector Bike Path	Public Works	
	Parks & Recreation	
	CEDO	
Develop a Bike Path along the eastern boundary of the	Parks & Recreation	
City, and establish connections with similar facilities in	Public Works	
neighboring communities.		
Develop shared ride and subscription service options for	Airport	
city-wide taxi services.	Public Works	
Re-evaluate the effectiveness of the City's Residential	Public Works	
Parking Program.		
Develop one or more Transportation Management	Public Works	
Association(s) to coordinate parking and TSM programs		
within the downtown and waterfront.		
Develop a trip redistribution ordinance as part of the City's	Planning & Zoning	
zoning regulations. Such an ordinance would require that	Public Works	
new development limit car trips at peak times. Developers		
could reduce or redistribute trips by using transportation		
demand management (TDM) methods in larger projects or		
by supporting local ridesharing and transit programs.		
Develop Auto-Capture/Park 'n Ride lots at the periphery	Public Works	
of the City.		
Long-Term		
Explore the feasibility of deploying Intelligent	Public Works	
Transportation Systems in public transportation service.		







City of Burlington, VT 1996 Municipal Development Plan

Lockheed-Martin



Fletcher Allen Health Care



Church Street Marketplace



John McKenzie Packing Co.

Burlington is a regional growth center for Chittenden County.

VI. ECONOMIC DEVELOPMENT PLAN

Vision Statement

Burlington is the retail, cultural, and economic center for the region. A strengthening of the city's economy is helping to decrease suburban sprawl and the costs of providing additional infrastructure. Burlington residents who have been left behind, or are not fully participating in the city and regional economy, are provided access to jobs, resources and services. The city's economic well-being is sustained through the continued generation of quality jobs through self-employment, enterprise development and small business growth. The city's quality of life is an important contributor to the economy and has been enhanced through a vibrant downtown, supporting cultural and recreational opportunities for residents, and promoting activities and development that are compatible with the city's neighborhoods and natural environment.

Regional Growth Center

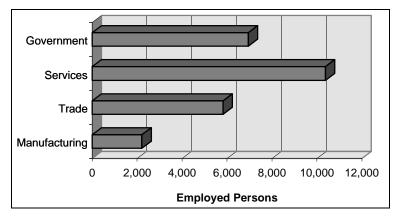
The City of Burlington is a major economic force in Vermont. As the regional growth center for northwestern Vermont, Burlington provides jobs and services for residents of the city, county, and beyond. Not only does the city host a variety of businesses within its own boundaries, but it also contributes directly to economic development activity and opportunities throughout the surrounding region. The city's overall quality of life, reputation as a forward-thinking community and host of urban amenities are a dominating attraction to locating a business in Chittenden County.

Burlington is central to the "Regional Growth Center" identified in the *Chittenden County Regional Plan*. By encouraging and accommodating growth in this area, surrounding communities and their rural working landscapes can be protected from unwanted sprawl development and supplied desired job opportunities and services. This combination of uses and landscapes provides the foundation for the region's competitive advantage. The growth center concept, with Burlington at its core, must be supported if this advantage is to be sustained into the future.

Burlington's Economic Mix

Burlington's vitality comes from its strong mixed economy. Diversity allows the city to weather temporary weaknesses different in sectors of the economy.

Nearly 35% of Burlington's employment base is service related - dominated by the health and educational fields. Service jobs have been the $_{Figure\ 26.\ 1992\ Employment\ by\ Industry\ -\ City\ of\ Burlington}$ fastest growing sector at



6.2% between 1988 and 1992. Health service jobs have grown almost 50% in the last ten years. Our institutions play a very important role in Burlington's economy. The University of Vermont and Fletcher Allen Health Care are the city's largest employers. They are an asset to the community and reinforce its economic base.

Retail jobs are also important to Burlington's economy comprising approximately 16% of the total in 1992. A strong retail sector keeps the city economy active and strong by contributing to the overall activity level, and attracting residents, visitors and businesses to the City. However, Burlington's position as the region's retail center has eroded to nearly 31% of county retail sales - down from 55% in 1970. In addition, retail jobs are rarely well-paying, and don't typically offer equivalent benefits of jobs in other sectors. Yet these jobs are crucial to students and others in the community for whom flexible, part-time jobs are essential.

Manufacturing has traditionally been vital to Burlington because it creates well-paying jobs, draws investment into the area, and strengthens other sectors of the economy. Presently 7.5% of Burlington's jobs are in manufacturing - down from 15.3% in 1980. This reflects, in large part, losses at Lockheed-Martin (formerly General Electric).

Sustainable Development Strategies

To remain vital, Burlington will continue to provide an environment conducive to businesses, good jobs for workers, and the necessary support - including good housing, childcare, access to services, educational opportunities, and a healthful environment. It will continue to invest in the downtown. It will support its existing job base and its mix of industry, government, education, health care, and tourism while encouraging the creation of jobs that benefit the worker, the consumer, and the environment. Following are 5 strategies aimed at making development of Burlington's economy sustainable over time.

CREATING NEW JOBS LOCALLY

Burlington's workforce grew from about 26,000 in 1980 to nearly 31,600 in 1989 - nearly 12,000 of which are Burlington residents. However, since 1989 total employment has dropped to 29,500 in 1992. Of particular importance is that approximately 59% of all employed city

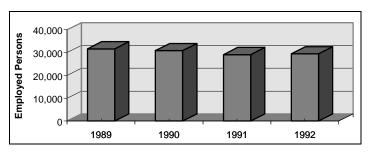


Figure 27. Burlington Employment Trends.

residents work in the city - by far the highest percentage in Chittenden County and up from 33% in 1980. While total employment has declined since 1990, self-employment and home-based businesses have grown significantly over the past decade. Between 1980 and 1990, people working at home has grown by 32% to over 600.

Because so few businesses relocate each year, new jobs will be created primarily by new or expanding local businesses. Burlington has been most effective as a generator for new, locally-owned businesses - a factor that has been important to regional job creation. Locally-owned and -controlled businesses not only create new jobs; they keep local dollars in the City to re-invest in improvements, services, and infrastructure. The continued growth and development of small and locally-owned businesses will be a high priority for the future.

JOBS FOR ALL

Burlington Although experienced an economic boom over the last ten to fifteen years, not everyone has shared in the good times. This is especially evident during economic downturns such as the one from the City is currently emerging. While Burlington has the lowest unemployment of any MSA in the Northeast, some people have

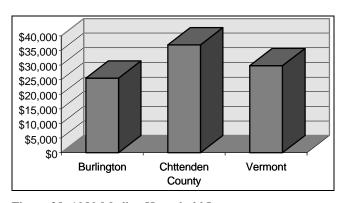


Figure 28. 1989 Median Household Income.

no jobs; others who work, earn too little to support themselves or their families; others still are under-employed - in situations that don't make the best use of their talents and abilities. Burlington's per capita income is less than 70% of the county. Most serious is that nearly one in five people in Burlington live in poverty, many of which are mother-led households - more than twice the rate of the county.

To improve the economic well-being of groups such as working-class young people, people with disabilities, and women, the City will work with the private sector to create job opportunities, offer training programs, provide housing, and ensure needed support services such as childcare and health benefits. The City will encourage the creation of well-paying, meaningful jobs that offer workers job security, salaries and benefits that support families, and a say in decisions that affect them.

MIXED USE AND MIXED RETAIL

One economic strategy that will guide the City into the future is **diversification**. Traditional economic development have typically focused on one large industry or employer. However, when that industry experiences a downturn, or the large employer reduces or closes operations, the impact on the community is significant. The volatility of technology and the restructuring of defense industries offer two pertinent examples. One advantage of targeting a broad range of industries and businesses is diversification of risk. Should one segment decline, the others remain to support the overall economy.

Neither tourism, education, small business, health care, finance, nor retail is the answer - it's all of them. The same is true within each economic sector. A range of retail from hardware to jewelry, from department stores to boutiques, will allow the City to serve the needs of its residents and workers, and remain an attraction to visitors.

INFRASTRUCTURE INVESTMENTS

In many cases, investment in the necessary infrastructure to support future development must occur first in order to attract business growth and opportunities. Early investment demonstrates a commitment and willingness on the part of the City that business is welcome and will be supported. Other sections of this Plan, most importantly *Transportation* and *Community Facilities and Services*, discuss in greater depth the type and location of future infrastructure development.

BUSINESS RETENTION AND PARTNERSHIPS

One of the basic tenets of sustainable development is making the best use of existing resources. It is within this context that the retention and nurturing of existing businesses must be the highest priority for the future. Successful businesses already in place are the best marketing tool. The City needs to have a better understanding of the needs of existing businesses, and be in constant dialogue with them to ensure that mutual concerns and objectives can be addressed through cooperation.

An example of this strategy already at work is the "Downtown Partnership." The Partnership is a public-private initiative between city government and the business community jointly addressing issues including transportation and parking, downtown development, public safety, and recruitment and marketing. In late 1989, the Downtown Burlington Development Association (DBDA), initiated the creation of *Burlington: A Shared Vision*. This document was prepared to help shape the City's last master planning process, and remains a viable blueprint for the downtown's future.

Supporting Targeted Industries

Burlington recognizes that in order to have successful and sustainable economic development, the city must target its energies. Without sacrificing existing businesses and economic diversity, the following areas present the greatest opportunities for future success given their growth potential, Burlington's competitive advantages, and their fit within broader community-based objectives of the city.

ENVIRONMENTAL ENTERPRISE AND TECHNOLOGY

Burlington already has a very positive image as an environmentally-friendly community, and is widely recognized as a highly desirable place to live and work. These advantages can be used as a powerful economic development tool to attract businesses that place a premium on social and environmental factors when locating new offices and facilities.

Burlington will encourage new business development within the environmental services and manufacturing sectors. These include environmental testing, engineering, waste management, education, research, audits, remediation and energy efficiency. Several examples already exist including Gardener's Supply, Vermont Energy Investment Corp., Living Technologies, Simply Better and Burlington Electric's McNeil Generating Station. In addition, Burlington will examine opportunities related to recycling and the re-use of recycled materials into value-added products.

Sustainable development must also consider value-added manufacturing and processing of agricultural and forest resource products. In addition to making productive and sustainable use of existing local resources, these types of businesses also provide markets for products produced throughout the region. This comes back to benefit the community in many ways by supporting local farmers and the surrounding traditional working landscape, and supports our high quality of life. Opportunities include additional agriculture in the Intervale, incubator space for small agricultural enterprises, specialty food production and distribution, community gardens, aquaculture and greenhouses.

TECHNOLOGY AND TELECOMMUNICATIONS

Computer technologies and telecommunications have rapidly become essential components in the success of nearly all types of businesses. Like the completion of the interstate highway system, the high-speed exchange of information and instant communications have dramatically changed not only the way businesses is done, but where. Once again Burlington's reputation as a desirable community can serve to attract many businesses, and business functions, related to technology and telecommunications. Examples include back-office administrative and processing operations, professional services, interactive media, electronic publishing, distance research and learning, and telemarketing.

While Burlington recognizes the growth potential in this industry, exactly how to tap into it and what are the infrastructure needs and potential impacts remain questions. The City will need to perform a technology audit to determine the capability and extent of existing infrastructure, examine emerging innovations in the industry, consider the potential impacts and how to address them, and offer a plan to improve Burlington's access into this growing industry.

In encouraging these types of technologies, the City will also take steps to ensure that start-up and small businesses are not left at an unfair disadvantage. Access to technological resources, education and infrastructure by small businesses should be established through community technology centers similar to that created within the Enterprise Community.

ARTS AND ENTERTAINMENT

Burlington is becoming widely recognized as an arts and entertainment center, and for its emerging music and recording industry. Efforts will continue to support arts and entertainment which expand economic activity and enhance the city's quality-of-life. In addition, the arts enliven the city beyond the 9-5 workday - offering a more efficient use of public infrastructure. Future opportunities include incubator space for artists to live and work, an arts information center downtown to provide comprehensive event listings and information, educational programs and events that showcase and celebrate the wealth of artistic creativity within the community.

CANADIAN TRADE

The elimination of trade barriers facilitated by NAFTA, political uncertainty, proximity to Burlington and the city's quality-of-life reputation all present significant opportunities for the expansion and/or relocation of Canadian-based businesses to Burlington. The City should capitalize on these through a marketing program focused on small and medium-sized businesses in Montreal and southern Quebec.

RECREATION AND TOURISM

Much of Burlington's reputation for a high quality-of-life is based on the abundant recreational opportunities in the area and the city's outstanding natural setting. These advantages also serve as attractions for tourism - coupled with shopping, restaurants, arts and entertainment.

Burlington has become a destination itself apart from the overall "Vermont Experience." The city hosts several major events throughout the year that attract visitors from throughout the northeast including First Night Burlington, Vermont City Marathon, Howard Bank Criterium, Discover Jazz Festival and many others. Surrounding communities benefit from Burlington's reputation and special events through proximity, overflow and simple name recognition.

Tourism creates many jobs in the service sector, especially hotels and restaurants, and the retail sector - bringing vitality and revenue to the area. While discussion occurs regionally

regarding the need for a large convention space, Burlington will ensure that it has the necessary meeting and exhibition space to attract small to medium-sized events downtown. However, Burlington can best encourage tourism by serving the needs of its residents first. A community that provides excellent facilities and services for its own inhabitants, and has a well-established sense of community, will continue to be an attraction to visitors.

HEALTH, EDUCATIONAL AND FINANCIAL INSTITUTIONS

As noted previously, service sector businesses related to health care, education and financial services play a dominating role in the city's economy. These businesses are also of the type that are in the best position to utilize available office space - both existing and potential, take advantage of emerging technology and telecommunications, and compliment an urban mixed land use pattern. The retention of existing facilities and businesses will be a high priority.

However, health care in particular is undergoing an industry-wide restructuring. The national debate over the rising cost of healthcare, and the recent merger of the Medical Center Hospital of Vermont, University Health Center and Fanny Allen Hospital, are only two examples. Burlington must closely monitor trends in this field, and work with the institutions to improve their ability to provide services and jobs in the community.

Strategic Locations for Development

Much of Burlington is already well developed, and much that remains provides important natural, recreational and open space for city residents - factors themselves that greatly benefit Burlington's economy. However, many opportunities for new and expanded development exist. Strategic locations for future development include the Downtown and Downtown Waterfront, the Old North End Enterprise Community, the Pine Street Corridor in the South End, Institutional Core Campuses, and Neighborhood Activity Centers. A more detailed discussion of these areas is found in the *Land Use* section of this Plan. Two additional areas are discussed below.

AN ECO-ENTERPRISE ZONE ON THE INTERVALE

A small portion of the Intervale is currently zoned as Enterprise, and is the home of Burlington Electric's McNeil Generating Station and Gardener's Supply Company. The Community & Economic Development Office (CEDO) and Gardener's Supply Co. are exploring the creation of an "Eco-Enterprise Zone" in this area. As conceived, such an zone would be used to attract environmentally-oriented and compatible businesses, and allow for a range of joint ventures and sharing of resources. One such example might include commercial greenhouses that are heated by waste heat from McNeil Station and utilize compost from Gardener's Supply. However, the Intervale remains an ecologically sensitive area, much of which is prone to seasonal flooding. These considerations must be accommodated in any plans for future development in this area.

BROWNFIELDS

Burlington's industrial past has left the city with a legacy of past mistakes that may produce opportunities for future development. The City has a host of older industrial sites with some degree of environmental contamination - the extent of which remains unknown. Burlington has begun to investigate opportunities to remediate these properties in order to bring them back into useful economic service. Once the degree of contamination is better understood, options for clean-up and redevelopment can be investigated. Not only do these site represent locations for new development, but also markets for locating new environmental service/waste remediation businesses in the city.

Cooperative Relationships

Planning for sustainable economic development in Burlington cannot occur in a vacuum. Burlington is highly dependent upon a wide range of factors, partners and relationships including neighboring communities, state government and non-profit development organizations. The same holds true for development activities within the city as well. City departments and the business community must be in constant dialogue and actively cooperate in order to achieve common objectives.

REGIONAL PLANNING AND COOPERATION

The close interdependence between the City and its neighboring communities demand a regional perspective on a number of issues related to economic development including land use, transportation and development itself. Currently the City participates in regional planning and development activities through the Chittenden County Regional Planning Commission (CCRPC) and the Greater Burlington Industrial Corp. (GBIC). The Lake Champlain Regional Chamber of Commerce plays a major role in promoting the entire region.

Efforts to work more closely as a region - to support and attract development and protect our competitive advantages - must continue. This should include an active dialogue between the public and private sector. Infrastructure, services, joint marketing and financing opportunities need to be considered. There may be increased support for an equitable sharing of local tax revenues generated from new development through a greater appreciation of the mutual gains and benefits.

COOPERATIVE RELATIONSHIPS

The city administration and departments must be in constant dialogue with the business community in order to address mutual needs and concerns. This has traditionally been a high priority, and is achieved primarily through the Downtown Partnership. However, many other collaborative opportunities between local businesses, institutions, neighboring communities and non-profit agencies exist, and should be actively pursued.

Economic Development Policy and Action Plan

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- Nurture sustainable development to provide for the city and its residents over the long term.
- Promote and strengthen a mixed economy, and work actively to retain existing businesses and jobs.
- Promote and support locally-owned and controlled small businesses including home occupations appropriate to the character of the neighborhood.
- Partner with the private and not-for-profit sectors to attract future development and conduct joint marketing.
- Invest in the necessary public improvements, particularly transportation, to strengthen the Downtown, both as a Regional Growth Center, and as city neighborhood.
- Work with neighboring communities, regional agencies and state government to promote land use and development policies that support the Burlington's role as the Regional Growth Center.
- Support sustainable development activities in target areas of the city including the Enterprise Community, Neighborhood Activity Centers, the Pine Street Corridor, Downtown, and the Downtown Waterfront.
- Focus marketing and recruitment for economic development towards target industries.

ACTION PLAN

Action Items	Lead Agencies	
Short-Term		
Implement the Economic Strategies outlined in the ONE	CEDO	
EC Plan.		
Examine the feasibility of creating a Community	CEDO	
Development Corporation.		
Provide small business with new or expanded financing	CEDO	
programs including a Risk Capital Fund and expanded		
Mirco-Lending Program.		
Conduct a Technology Audit of the City to evaluate	CEDO	
opportunities to improve access to growing	Planning & Zoning	
telecommunications markets.	CEDO	
Complete a Comparative Analysis of the cost of, and	CEDO	
obstacles to, development in the City with neighboring and similar sized communities.	Planning & Zoning	
Complete redevelopment plans for the former Police	CEDO	
Station.	Planning & Zoning	
Establish an Arts Information Center in a downtown	City Arts	
location.	CEDO	
Expansion of the Lake Champlain Basin Science Center on	CEDO	
the Downtown Waterfront.		
Consider the creation of an Eco-Enterprise District for a	CEDO	
portion of the Intervale.	Planning & Zoning	
Medium Term		
Expand the concept behind the ONE Community	CEDO	
Technology Center into other parts of the city.	CEDO	
Complete redevelopment plans for the Downtown	CEDO	
Waterfront east of Lake Street	Planning & Zoning	
Complete redevelopment plans for the former Urban	CEDO	
Renewal Area properties on Cherry Street.	Planning & Zoning	
Establish plans for the renovation and adaptation of the Moran Generating Plant on the Downtown Waterfront.	CEDO Planning & Zoning	
Establish a Sustainable Development Business Program to	CEDO	
provide information, education and resources to the	0220	
business community regarding making their business		
practices and processes more environmentally friendly and		
sustainable.		
Expand energy efficiency and cost reduction programs for	BED	
businesses.	CEDO	

Long-Term	
Develop additional conference and exhibition space within	CEDO
the Downtown.	Planning & Zoning
Evaluate opportunities to expand the Eco-Enterprise	CEDO
Zoning District to other parts of the city.	Planning & Zoning
Establish a relationship with area institutions for	CEDO
technology development and deployment initiatives.	



Toda and

City of Burlington, VT 1996 Municipal Development Plan

Fletcher Free Library



Community-Based Policing



Waterfront Park/Burlington Bike Path



Burlington Fire Dept.



Burlington Police Dept.

Burlington recognizes the importance of providing high quality community services and facilities, and places greater emphasis on conservation and upgrading existing buildings and infrastructure than on new construction.

VII. COMMUNITY FACILITIES AND SERVICES PLAN

Vision Statement

Burlington has recognized the importance of providing high quality community services, and places greater emphasis on conservation and upgrading existing buildings and infrastructure than on new construction. Existing resources are managed and used effectively in order to sustain an appropriate level of development without unnecessarily burdening the taxpayers and resource base of the community.

Without adequate infrastructure and public services, the city cannot sustain its current level of development - let alone continue to grow and serve as the Regional Growth Center. The City must coordinate land use with existing facilities and utilities to minimize the costs of additional infrastructure, and ensure growth keeps pace with the City's ability to provide services. Perhaps most pertinent to this section is the concept of *sustainability*. Pursuing a sustainable program for providing municipal infrastructure and services is based on:

- **1. Maintenance:** The City's existing buildings, facilities and property must be properly maintained in order to avoid costly and unnecessary capital expenses due to neglect.
- **2. Efficiency:** Municipal facilities and services must operate at maximum efficiency towards their respective goals and objectives in order to avoid wasting scarce resources and tax dollars.
- **3. Conservation:** The City must place a high priority on the conservation of precious resources energy, water, land, human, etc. so that they may remain available for use by future generations.
- **4. Partnerships:** The City must pursue partnerships within and between neighboring communities, government departments, non-profit agencies and private businesses in order to maximize resources and talents, share responsibilities and serve the future vitality.

Burlington's municipal facilities include water supply, sewage disposal, and stormwater drainage. Municipal services include fire, police, library, parks, curbside recycling and general government services. This section discusses various services and facilities provided by the City, including current limitations, potential problems and proposed improvements. The city's electric utility and schools are discussed in separate sections of this Plan.

Municipal Water Supply System

Burlington's drinking water comes directly from Lake Champlain. The city's water distribution system includes the Water Treatment Facility located on the downtown waterfront, the Main Street Reservoir, two water tanks, and a pipe distribution system.

The Hill Section, Fletcher Allen Hospital and UVM, because of their elevation, are served by two high water tanks. This area is called the <u>high service area</u>. The rest of the city is in the low service area, served by the Main Street 7-million-gallon reservoir.

Currently the City's water rates are among the highest in the region. This is due in part to an assessment based on wastewater flows, and coupled with the debt burden on recent, but long overdue, improvements to the wastewater system. Stabilization of water rates remains a high priority for the City. Future efforts to improve the municipal water system must focus on the rate structure as well.

SYSTEM CAPACITY

In 1984, the capacity of the water system was expanded to 18 million gallons per day (MGPD). However, peak demand has never actually exceeded 12 MGPD. Burlington is exploring ways to use some of this remaining capacity, such as selling water to neighboring communities or the Champlain Water District, in order to help stabilize water rates for city users. Colchester Fire District #2 has purchased wholesale water from the City since 1965. This contract was recently extended to 2010. Adjacent communities and water systems are encouraged to utilize Burlington's excess capacity before building new treatment facilities.

The Department of Public Works has entered into an agreement with Burlington Electric to investigate the feasibility of providing district-wide heating and cooling to the urban waterfront and hill sections of the City. If viable, such a utility would utilize some of the water system's excess capacity, provide an alternative source of energy, and help lower water rates throughout the City. (Additional discussion of District Heating & Cooling is found in the *Energy Section* of this Plan.)

DISTRIBUTION SYSTEM NEEDS

Deficiencies in the water storage system pose potential problems during fire-fighting operations that draw large volumes of water. In addition, while several water pipes have been replaced over the years, the distribution system in the downtown continues to use some of the original pipes laid in the 1800's. Many of these pipes are very brittle. This problem is most evident during the winter months when sections freeze and breaks occur, and play a role in restricting adequate fire flows.

The repair and replacement of decrepit sections of the water distribution system may prove expensive and disruptive to daily activities in the Central Business District. Cost estimates for a system-wide upgrade approach \$30 million. Efforts to solve this problem must be coordinated with other planned construction activities in the right-of-way in an effort to save excavation costs and minimize disruption to businesses, public services and the streetscape.

Municipal Wastewater System

The municipal wastewater system serves nearly 98% of the city. The wastewater treatment system includes a collection system of pipes under the streets, 23 pumping stations, and 3 treatment plants - the Main Plant at the foot of Maple Street, the East Plant on Riverside Avenue and the North Plant off North Avenue Extension.

SYSTEM CAPACITY

In 1991, the City completed a \$52 million wastewater improvement program to expand capacity, separate storm and sanitary sewer systems, and upgrade treatment systems. Capacity at the Main and East Treatment Facilities were expanded by 1.3 million gallons per day (MGPD) and 0.2 MGPD respectively.

Wastewater capacity should not be a factor in constraining potential growth since the projected population for 2015 remains in the vicinity of 40,000, and the expansion should serve a total population of more than 60,000 people. Federal regulations regarding the treatment of combined sewer flows, however, may limit existing capacity at the Main Treatment Facility and ultimately limit growth in that area.

Sludge is a by-product of the sewage treatment process. Presently, the City participates in a regional Biosolids Processing Facility where de-watered sludge is converted for use as a fertilizer. The City is supporting other communities in the region by de-watering their sludge prior to it being sent to the Regional Treatment Facility. In addition, Burlington currently treats leachate collected at the Regional Disposal Facilities in Williston. Both are examples of regionalization and sharing of services and infrastructure that save resources and keep down costs.

STORMWATER RUNOFF

In the past, sewer overflows during storm events have discharged directly into Lake Champlain without treatment, and basements in certain parts of the city have flooded. As part of the wastewater system improvements, the City separated combined storm and wastewater in the northern and southern sections of the city. However, because of dense development downtown, that portion of the system remains combined. To compensate, the capacity of the Main Treatment Facility was significantly expanded to treat stormwater runoff in addition to the normal sewer flows.

Still, untreated stormwater continues to enter Lake Champlain directly and via the Winooski River and Englesby Ravine. The quality of stormwater runoff is a serious problem. Many toxic substances are used on our streets, lawns and in our cars. As the city's surface area becomes increasingly paved and otherwise impermeable, the natural filtration process decreases. Unlike most overland flow, water entering the stormwater system does not have the benefit of being filtered through vegetative buffers. Each rainfall flushes pollutants from streets and yards into the stormwater collection system which are then transported directly into the lake or river. Although costs may be significant, the City

must consider treating stormwater and continue to mandate that large developments install and maintain systems to collect and treat runoff.

Solid Waste

As throughout Vermont and elsewhere, Burlington has a growing solid waste crisis. City residents discard approximately 31,000 tons of trash a year.

REGIONAL MANAGEMENT AND DISPOSAL

Due to environmental impacts, shrinking land resources and public opposition, it has become increasingly difficult and costly to properly dispose of solid waste. Burlington's own landfill on Manhattan Drive closed in 1989, as did a small lined landfill in Colchester in 1992. The City continues to maintain responsibility for monitoring these sites for possible groundwater contamination.

Recognizing that solid waste management is a regional issue, Burlington is a member of the Chittenden Regional Solid Waste Management District (CRSWMD). The District recently closed a regional lined landfill in Williston and has been attempting to develop another site for several years. Long-term disposal remains a very volatile issue that must be resolved. Other regional solid waste management facilities that Burlington benefits from include a Biosolids Processing Facility for sludge, a Materials Recovery Facility for commingled recyclables, an Environmental Depot for household hazardous wastes, and composting and a Wood/Yard Waste Depot on the Intervale.

CURBSIDE PICK-UP AND RECYCLING

Residential solid waste is picked-up at the curbside by private haulers. Residential, commercial and institutional land owners must make their own arrangements for waste pick-up. While this generally has proven to be effective, there is no cooperation between haulers to coordinate pick-up days, resulting in an over-abundance of trucks in residential neighborhoods. One alternative to the present system to be considered would be to franchise haulers within the City. The Department of Public Works believes this would better coordinate service, reduce truck traffic in the neighborhoods and may provide an overall cost savings to individual property owners.

In order to reduce the waste stream and make better use of resources, the City operates its own recycling program through the Department of Public Works. The program is funded by a Solid Waste Generation Tax assessed on each hauler. The program was first piloted in 1991 with a waste reduction goal of 2%. Burlington was recognized in 1994 by the US Conference of Mayors for a waste diversion rate of 41% - exceeding a statewide goal of 40% by 2000. In FY1995, the City collected 2.886 tons of recycled material - nearly 385 pounds per household, and a 20% increase over the previous year.

Beyond recycling, Burlington must continue to find ways to decrease the volume of trash produced. This includes reducing packaging, and stimulating the recycled goods' market through purchasing policies. Closer to home, the City could increase its use of recycled

paper in offices, use less paper, and use it more than once. It could also discourage the use of disposable goods such as plastic utensils.

Public Safety

As Burlington has grown over the years, public safety has become an increasingly important concern. The Burlington Police Department has recently moved into a new facility located at the southern end of North Avenue which should greatly improve their ability to provide services throughout the city. The Department meets national standards, which recommend 2 officers per 1,000 residents. However, because Burlington serves as the regional growth center - providing many services unrelated to residential uses - the police force must also be capable of meeting a wider range of nonresident demands.

COMMUNITY-BASED POLICING

Since 1990, the Burlington Police Department has operated a Community-Based Policing Program. Community-Based Policing recognizes that the sole responsibility for protection and law enforcement cannot rest with the Police Department. By placing officers directly into the neighborhoods, a greater familiarity develops between the police and the residents. The officers then serve as facilitators, allowing the citizens to accept more responsibility for keeping their neighborhoods safe, and are available as a resource when incidents occur.

Currently the Department maintains four Community-Based Officers serving neighborhood districts, including the Downtown and the New North End. The Department's goal is to have community-based policing established in 6 to 7 neighborhood areas throughout the city. This program is an important component to enhancing the vitality of our neighborhoods as attractive and safe places to live, and facilitating their individual sense of community.

FIRE & AMBULANCE SERVICE

The Burlington Fire Department is housed in five stations located throughout the City. The Department has expanded stations on North Avenue, Ferguson Avenue and Central Station within the past 5 years, and has completed a historic preservation project at Station #3 on Mansfield Ave. to correct structural deficiencies and make facade improvements. The fire department has six fire-engines, a 100-foot aerial truck and tower truck, and two ambulances. A boat to deal with emergencies on the lake has been discussed as a potential future need as the downtown waterfront continues to develop.

Besides fighting fires, the Fire Department provides fire investigation, community outreach and emergency medical services. In the last year firefighters responded to 3,787 fire calls including 3,213 requests for emergency medical assistance.

Fire department officials believe they have adequate facilities and equipment with which to fight fires as long as building heights do not increase. Fire prevention is the most important concern however. Newer structures, equipped with sprinklers and fire detectors, are less likely to burn than are older buildings. Since much of the city's housing, old and new, is wood frame construction, the City must target its efforts towards improving the safety of existing structures. One potential example is requiring sprinkler systems in all multi-unit residential construction and rehabilitation.

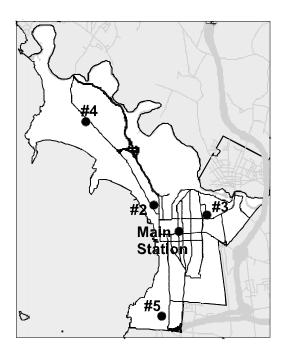


Figure 29. Burlington Fire Department Stations.

COMMUNICATIONS

Both the Fire and Police departments currently use a combined 911 emergency communications system through a central dispatch in the Police Department. Emergency service officials statewide are currently planning the implementation of Enhanced-911 service. Enhanced-911, or E-911, provides information to the dispatcher on the <u>location</u> of the originating emergency call. This service eliminates much of the uncertainty when locating emergency calls, should speed up response time and greatly improve efficiency and public safety.



Parks & Recreation

Burlington contains approximately 980 acres of public park land. These lands include parks that are developed for intensive public use, as well as property that remains undeveloped for passive recreation and/or conservation purposes. Over 530 acres of this public parkland is owned by the City and managed by the Department of Parks and Recreation. An additional 450 acres is owned and managed by the Winooski Valley Park District, primarily in the form of conservation lands offering access and footpaths to shorelines.

Parks provide a number of functions, and serve a variety of populations. District Parks serve as conservation areas and open space that benefits the entire community, while Neighborhood Parks typically offer playground equipment to serve small areas of

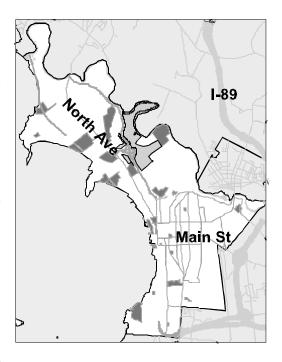


Figure 30. Burlington Park Lands.

the city. Diversity of public open spaces is an important consideration in the future planning for parks. The City must continue to provide a wide range of open space and recreational opportunities for its population, workforce and visitors. These include both developed and undeveloped sites throughout the city, and distributed within each neighborhood. Special attention must be paid to long-term protection and use to ensure these sites remain a benefit to the city into the future.

In addition, linkages between recreational facilities and parklands are critical to making the most efficient use of these spaces and maximizing their accessibility. We must consider parks in the context of a <u>system</u>. These linkages, or *Greenways*, take the form of improved recreational paths like the Burlington Bike Path and unimproved foot trails, but also include wildlife travel corridors, streambank buffers, linear parks and public viewsheds. In 1990, the *Chittenden Greenways Project*, sponsored jointly by Winooski Valley Park District and Chittenden County Regional Planning Commission, identified a countywide network of greenways. Burlington should continue to offer improved walking, biking and recreational opportunities with an eye towards connections with adjoining communities.

BURLINGTON PARKS AND RECREATION DEPARTMENT

The Department of Parks and Recreation is responsible for the planning and management of the city's park system under the direction of the Parks and Recreation Commission. This system includes City Parks, Neighborhood Parks, Playfields, Special Use Areas and District Parks. In addition, the Department is responsible for planning and coordinating community gardens, planting and maintaining approximately 8,000 street trees, and

offering a broad base of recreational programs to residents of the city and neighboring communities.

As a regional center, Burlington's parks and recreational facilities offer an important attraction to businesses and tourists - thus serving the city's future economy in addition to its residents. The Parks and Recreation Commission has adopted national standards to determine the City's need to acquire and develop additional park land. These standards are based on proximity to populations, and identify the quantity, type and distribution of park land and recreation facilities. Recent studies show that 50% of those who use Burlington's parks are non-residents, and City standards have been modified accordingly.

In 1992, the Department completed a *Five Year Recovery Action Plan 1992-1997*. This plan was prepared in an effort to define specific needs and interests of the public with regard to Parks and Recreation facilities and programs. The current Plan outlines three areas of focus for the City:

- addressing increased demand associated with continued residential growth;
- development of recreational facilities associated with the Lake Champlain waterfront; and
- development of a network of bicycle paths throughout the City.

The Five Year Recovery Action Plan 1992-1997 will be revised in light of demographic changes, financial constraints and new opportunities. The Parks and Recreation Commission has identified the need to maintain and rehabilitate existing facilities and infrastructure as its top priority. Two other issues that must receive consideration are balancing the priorities and responsibilities between multi-user Class 1 Bike Paths and Class 2 Bike Lanes throughout the City, and developing a Master Plan and Site Planning Guidelines for Street Trees. Finally, this plan should revise the Burlington Area Community Gardens Master Plan (1991) and increase the availability of convenient garden plots to all areas of the city.

Maintenance

Perhaps the greatest need, and in fact the Department and Commission's highest priority, is adequate operating funds to <u>maintain</u> the park system's property and facilities. Proper maintenance is essential to ensuring that our parks adequately and efficiently serve their intended purposes. It can also prevent the need for unnecessary capital improvements to correct deficiencies which occur as a result of neglect. Priority is given to restoration and rehabilitation projects over new construction whenever possible. Maintenance must be a priority issue for the City's park system in the future.

Future Needs

The Parks and Recreation Commission has identified indoor recreational facilities as the most pressing unmet need. The Commission's long-term solution proposes to meet this need through a Recreation Center that would include a swimming pool, a therapy pool, an indoor track, senior citizen and children's facilities, and multi-purpose rooms. The

Waterfront Revitalization Plan proposed such a facility north of the former Moran Generating Plant.

The most pressing unmet park system needs includes a four-acre neighborhood park the New North End. The soon-to-be-completed Elaine and George Little Park will serve to fulfill some demand for public space in the Old North End, as well as improve the aesthetic qualities of the adjoining neighborhood. The City is also pursuing the development of a Skate Park next to the former Moran Generating Plant on the waterfront. This project will provide a much needed location to accommodate a growing demand for skateboarding and in-line skating facilities.

The Parks & Recreation Department relies heavily on the use of School Department property and facilities. This is an example of the importance of sharing resources between city departments for the maximum benefit to the community. However, through shared use, these facilities receive more intensive use than anticipated when originally constructed, and thus will be expected to require more frequent maintenance and restoration.

WINOOSKI VALLEY PARK DISTRICT

Separate from the Burlington Parks and Recreation Department, the Winooski Valley Park District (WVPD) also manages parkland in Burlington. The WVPD is a consortium of member communities along the lower Winooski River working together to conserve natural resources of regional significance. The mission of the WVPD as stated in their Master Plan is the:

...planning, acquisition and management of lands and waters within the boundaries of its member municipalities in the Winooski River Valley for the purposes of conservation, preservation of natural areas, establishment of parks and passive recreation.

Properties owned and managed by the WVPD within the city include: Ethan Allen Homestead, Derway Island Nature Preserve, Heineberg Wetland and the Salmon Hole. These parks are a great asset to the city and its residents.

Burlington is very fortunate to have such a wealth of conservation lands. These properties provide important recreation, education and conservation opportunities that benefit the entire region. Future development in the City must ensure the long-term protection of these properties, encourage their use for educational and recreational purposes, and consider future acquisitions of important and threatened conservation areas.

Library Services

Residents of Burlington have access to several libraries throughout the community. These include the Fletcher Free Library operated by the City, the UVM Bailey-Howe Library and other smaller libraries in local colleges and neighboring communities.

FLETCHER FREE LIBRARY

Located in a renovated and expanded building on College Street, the Fletcher Free Library is a source of information, education, culture, and recreation for residents of Burlington, and the surrounding region. The library has approximately 15,000 borrowers, and receives nearly 800 daily visitors. The library currently holds 115,666 volumes, 8,529 videos, and 263 periodical subscriptions. A newly assessed 0.5 cent tax dedicated to books is expected to generate approximately \$87,000 in FY1997.

The library has recently completed a new computerized card catalog and checkout system as it continues to make the best use of emerging technologies. This effort is expected to continue with integration into the Vermont Automated Library System (VALS). VALS offers dial-up access to card catalogs in the State Library System and most Vermont colleges, and a variety of other information services including pending legislation, state bids and text-based internet connections. Technology promises to improve the public's access to information and services, and libraries are likely to become central information points. Improved public access via technology may also reduce unnecessary automobile trips.

The Fletcher Free Library also provides a variety of cultural events, exhibits, and meeting rooms for groups and programs. As the city grows, the library will need to continue to expand both its collection and its services. The library should continue to serve as an important community focal point. Continued increases in use of the library will also demand the continued maintenance and improvement of existing facilities.

Neighborhood Linkages & Outreach

The library has an outreach librarian to bring library services into the community. The Library operates an Outreach Van that serves senior and child care centers, low income neighborhoods and shut-ins. The vehicle will need to be replaced in the near future.

The library also has made attempts to offer some of its services within neighborhoods. However increasing reliance of volunteer staff and limited volumes available for circulation to branches has made this difficult to maintain. Any future consideration for branch libraries should be focused on utilizing existing public or community facilities, such as schools or senior centers rather than new construction, and should be targeted for Neighborhood Activity Centers.

General Government Services

The City of Burlington employs over 650 people located in many different sites throughout the city, including general city services in City Hall and Ethan Allen Fire Station, Parks & Recreation offices at Perkins Pier and Leddy Park, the Department of Public Works on Kilburn Street and Pine Street, and Electric Department facilities on Pine Street, Lake St. and the Intervale.

INVENTORY OF CITY PROPERTY AND BUILDINGS

As the city grows and expands its services, pressure for additional employees and facilities will also increase. Because city government is distributed among several quasi-independent departments, there is often inadequate consideration of joint services, and an independent decision of one department will likely effect others. For example, expansions of department functions within City Hall has created a serious shortage of meeting rooms.

In order for the City to make informed decisions regarding its own future needs, it must maintain an accurate inventory of all city-owned property - including current condition and future capabilities. Where available, this type of information is typically maintained by the individual departments with limited coordination. With the exception of periodic Master Plan updates and annual budgeting processes, there are few opportunities for city services and facilities to be considered as a single entity.

In 1992, the City began an annual Capital Improvements Program (CIP) for the prioritization of capital needs and allocation of capital funds between city departments. The CIP is an essential component to the City's financial planning processes. An accurate inventory of all city property, facilities and buildings must be incorporated into the annual Capital Improvements Program. Additional steps should be explored for joint planning and use of city- and school-owned property and facilities.

IMPROVEMENTS AND MAINTENANCE OF CITY BUILDINGS

City-owned buildings and facilities are an important capital asset, and present a visible expression of the City's values, priorities and expectations. The City must serve as an example with rehabilitation and new construction projects of proper design, energy-efficiency and long-term maintenance.

In order to ensure the sustainability of its capital plant in order to prevent costly and unnecessary repair and reconstruction in the future, the City must maintain a long-term building maintenance and improvement program that shares resources between departments. This is especially true for maintenance needs as capital funds are increasingly scarce.

CONCENTRATION OF SERVICES IN DOWNTOWN

In order to encourage future development, and to provide a wide-range of city services in a centralized location, the City will concentrate its facilities and services downtown whenever feasible. Locating city offices and services in the downtown provides opportunities for cooperation and collaboration between departments. It improves public access, opportunities for sharing resources, and lessens unnecessary automobile trips for city employees and the public.

One such effort in the future should address the co-location of departments, or department offices, responsible for permitting. City departments that issue development permits should be accessible in one central location to provide permits and information. This would not only improve public access and make the overall process easier to understand,

but also would facilitate streamlining and improve coordination and collaboration between the various departments that issue permits.

ROLE OF TECHNOLOGY AND TELECOMMUNICATIONS

Through the annual Capital Improvements Program, the Planning Commission has recommended that the City take a comprehensive look at how city government can make the most effective and efficient use of technology and telecommunications. In 1995, the City allocated resources for a computer needs assessment. The purpose of this study was to identify how various portions of city government currently utilize computer technology, and define ways to share resources most effectively.

Technology and telecommunications hold significant opportunities for improving the way city government functions and provides services to the public. Computers must be more than automation-for-automation-sake, however. Technology must, at a minimum,:

- improve the efficiency and accuracy of routine and duplicative tasks;
- be a vehicle for communication and sharing information within city government, and with the public; and,
- facilitate cooperation and collaboration between city departments.

Community Facilities and Services Policy and Action Plan

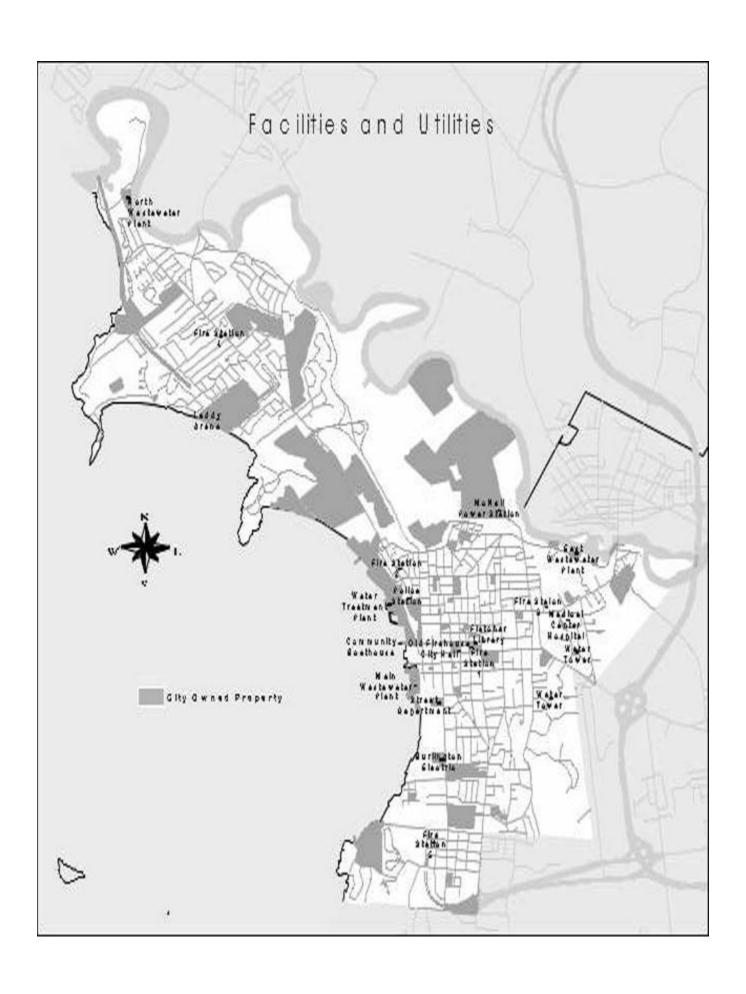
CITY POLICIES

THE CITY OF BURLINGTON WILL...

- Make the most effective and efficient use of existing services, buildings, utilities and facilities before adding new capacity, or initiating new construction.
- Coordinate land use and development with the availability and capacity of public services, facilities and utilities, in order to ensure a high level of service.
- Ensure that existing public property, buildings, and capital facilities receive regular maintenance, and any upgrade, replacement, or expansion of these facilities be based on approved standards.
- Coordinate utility work including highway, gas, water, sewer, and electric to minimize the costs of construction and impact on the neighborhood.
- Include the needs of workers and residents, as well as the impact of visitors, in setting standards for service.
- Place appropriate fiscal burden of facilities and utilities on the users.
- Protect its natural environment including Lake Champlain and the Winooski River from damage and degradation caused by public infrastructure and utilities.
- Require that all city buildings, facilities and infrastructure adhere to a high standard of urban design, public accessibility and energy efficiency.
- Concentrate City administrative functions and public services in the downtown to the greatest extent possible.

ACTION PLAN

Action Items	Lead Agency
Short-Term	
Develop a long-range Municipal Building Maintenance and	Treasurer
Improvement Program.	Public Works
	Planning & Zoning
Upgrade the water distribution system to correct fire	Public Works
protection flow deficiencies.	
Modernize, where necessary, portions of the water	Public Works
distribution system.	
Develop strategies to treat stormwater runoff on-site	Planning & Zoning
through site design guidelines.	Public Works
Complete the implementation of a pocket park on No.	CEDO
Winooski and Bright Streets.	Parks & Recreation
Complete plans for the creation of a Skate Park.	CEDO
	Parks & Recreation
Define standards and requirements for paving materials	Public Works
that increase natural filtration.	
Revise Parks and Recreation's Five Year Action Plan.	Parks & Recreation
Implement the recommendations of the Computer Needs	Treasurer
Assessment, and provide connections to all City	
departments.	
Medium Term	5 111 111 1
Require sprinklers in all new residential construction and	Public Works
rehabilitation involving four or more units.	Fire Department
Establish a City Permitting Center in City Hall or the Old	Planning & Zoning
Fire House.	Public Works
Treat stormwater runoff through system improvements.	Public Works
Establish Utility Corridors within public rights-of-way to	Public Works
co-locate utilities, minimize the costs of construction and	
maintenance, and avoid negative impacts to the city	
streetscapes.	
Evaluate the costs and benefits of franchising solid waste	Public Works
haulers within the city.	D 11
Complete the implementation of the Community Based	Police
Policing Program city-wide.	
Long-Term Develop on Indeed Proposition Contains the Downtown Proposition	
Develop an Indoor Recreation Center in the Downtown.	Parks & Recreation
Develop a neighborhood park in the northeast section of	Parks & Recreation
the New North End.	Planning & Zoning





City of Burlington, VT 1996 Municipal Development Plan



Electric Vehicle Station



Burlington recognizes the development and use of any power source has associated social and environmental costs. We have a responsibility to limit such costs which should be borne, to the extent possible, by the beneficiaries of new power source development.



McNeil Station Biogasification Project

VIII. ENERGY PLAN

Vision Statement

Burlington's energy use has been guided by the following principles:

- Our quality of life is dependent on a sustainable and respectful relationship with the environment.
- The development and use of any power source has associated social and environmental costs. We have a responsibility to limit such costs which should be borne, to the extent possible, by the beneficiaries of new power source development.

Energy Use & Supply

According to Energy Use in Burlington Vermont (1989), the annual cost of energy consumed in Burlington was approximately \$78 million. Commercial users consume almost \$24 million, industrial more than \$6 million, and residential almost \$15 million. The cost of energy used for transportation is more than \$32 million a year, suggesting that policies to curb miles traveled and increase fuel efficiency can yield significant energy savings.

Since only 3 percent of energy used for residential heating comes from wood, city residents are largely dependent on nonrenewable fuels. In 1989, approximately 23 percent of energy used, or 51 percent of the dollars spent, in homes came from electricity. Since that time, through the efforts demand-side management of programs, residential electric heat has been Figure 32. 1989 Residential Energy Sources for reduced dramatically down to 2% of Burlington.

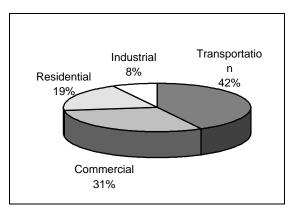
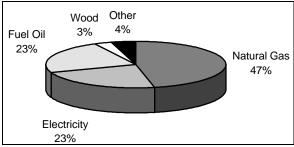


Figure 31. 1989 Annual Energy Consumption in Burlington.



homes. Electricity is a high-quality power source, but inappropriate for heating. Natural gas is a more suitable heat source. Vermont Gas, a private company, provides natural gas to most of the city, except those areas where low demand, topography, or subsurface conditions make laying pipeline difficult.

Burlington Electric

Burlington Electric Department (BED), a "citizen-owned" non-profit municipal energy company, provides electricity throughout the city. BED serves the full range of energy services including generation, transmission, distribution and other retail and administrative support services.

BED FACILITIES

BED owns 50% of the 52-megawatt (MW) McNeil Generating Plant located in the Intervale. McNeil Station is one of the world's largest municipally-owned woodchip-fueled electric generating facilities, and is part of an experimental biomass gasification demonstration project to begin operation in 1996-7. Land adjacent to McNeil Station remains undeveloped, and BED has expressed interest in its use for other innovative energy-related uses. In addition, BED owns a 25-MW gas turbine located on the Downtown Waterfront. The gas turbine is capable of bringing the entire city on-line, including the McNeil Station, in under 30 minutes from a cold start. This energy self-sufficiency is an important component to Burlington's future sustainability.

Because certain power contracts will expire by the end of the decade, BED is seeking other power supply options including local generation. It is collaborating on the Chase Mill Hydro Project on the Winooski River which produces an additional 1.3-MW of power. BED is also capturing methane gas at the former city landfill north of Manhattan Drive to generate about 0.5-MW of power.

In addition to its own generation facilities, BED purchases power from a variety of sources through the New England Power Grid. In determining where to purchase energy, BED must consider the total social and environmental costs as well as the out-of-pocket ones. For example, when one considers the difficulty and costs of nuclear waste disposal, Vermont Yankee may prove to be a more expensive alternative than other sources. In part, Burlington chose not to purchase power from Hydro-Quebec for these types of reasons. BED also will need to carefully scrutinize its generation expansion proposals in light of possible de-regulation and demand reduction strategies. If new generation alternatives are pursued, careful consideration must be given to effects on the natural and built environments of the city.

DISTRICT HEATING & COOLING

BED, in conjunction with the Department of Public Works, is studying the feasibility of district heating and cooling within the city. Two areas under consideration include the Downtown Waterfront and adjacent CBD, and the Hill Section including the institutions. Although not under consideration at this time, the concentration of industrial land uses along Pine Street may make this area another attractive location to provide this type of service.

The concept for district heating and cooling is to utilize excess city water capacity, combined with energy and waste heat produced by McNeil Station and a smaller gas turbine. This steam or hot or chilled water would be distributed underground to either heat or cool buildings within the district. If feasible, district heating and cooling is expected to provide a viable energy alternative, make use of existing water capacity, diversify the city's energy mix, and make the city a more attractive and competitive location for business.

ENERGY EFFICIENCY PROGRAMS

With the support of Burlington residents in the form of a \$11.3 million bond, BED began an ambitious energy efficiency program in 1990. These funds have been used to leverage an additional \$4.5 million to date. BED has implemented a wide range of programs to reduce overall energy consumption and costs through the city. These included:

- Smartlight: leases compact florescent energy saving light bulbs to consumers.
- Neighbor\$ave: offers household energy audits, compact florescent light bulbs, and installs water and energy savings measures for electric water heater customers.
- **Heat Exchange**: offers assistance and financial subsidies to convert customers from electric heating to other heating sources.
- **Top 10**: offers a customized menu of energy savings opportunities to the City's largest electrical customers to provide "positive cash flow" financing of demand-side management measures.
- Energy Advantage: offers "positive cash flow" financing to deliver retrofit energy savings measures to small to medium-sized businesses.
- **Energy-Efficiency Guidelines**: adoption of minimum standards for buildings and energy-consuming equipment in new construction and rehabilitation projects.
- Construction and Equipment Replacement: provides technical assistance and customized incentives for reducing energy demand beyond the Energy Efficiency Guidelines.

As of April 1995, BED's programs had supported over 14,500 installations translating into an annual savings of 29,000 mWh (megawatt hours) or \$2.9 million. These completed projects are expected to save over 400,000 mWh, or \$50 million, over their lifetimes. In environmental terms, these projects have prevented the release of over 17,500 tons of carbon dioxide into the air each year - or 260,000 tons over their 15 year lifetime.

THE FUTURE UNDER DE-REGULATION

BED is participating in discussions at the federal and state level concerning de-regulation of the electric industry and the introduction of competition. The discussion centers primarily on the deregulation of the generation component of the industry, and the introduction of competition, or choice, for the retail customer.

While changes of this magnitude typically offer unforeseen opportunities, several issues must be considered. These primarily include environmental impacts associated with energy sources, protection of low income consumers, and continued support for research and development. BED has been a leader in environmental protection, efficiency and renewable energy resources, and addressing the needs of low income consumers. BED's commercial and industrial rates are among the state's highest due in part to the City's priorities in these areas. Local ownership and control has been essential to realizing these objectives.

BED and the VT Public Service Board should continue to investigate and advocate for opportunities to maintain local jurisdiction, the use of exit fees to discourage or at least compensate for the potential loss of large customers, and support for environmental protection and renewable energy resource programs.

Municipal Energy Use

The City, through its own buildings, facilities, equipment and services, must serve as an example of appropriate and innovative energy use and efficiency. This includes heating, cooling and energy-savings installations in city buildings, sharing of resources between departments, proper maintenance of buildings and equipment, and the use of alternative fuels and technology.

SITE DESIGN CONSIDERATIONS

Energy efficiency efforts must also be integrated with other community priorities. These include plans and priorities that respect the built and natural environment, and balance aesthetics, safety, energy efficiency, and neighborhood quality of life. Several energy-related issues - including placement of utilities underground, street and site lighting, and the location of transformers and meters - are discussed previously in the *Built Environment* section of this Plan.

Energy Policy and Action Plan

CITY POLICIES

THE CITY OF BURLINGTON WILL:

- Maximize overall energy efficiency, reduce energy requirements, and minimize the need for new energy resources on a citywide basis.
- Improve local generation efficiency and preserve opportunities for future transition to renewable sources, cogeneration, and district heating.
- Improve the energy efficiency of city-owned buildings .
- Reduce transportation energy use by lessening reliance on drive-alone car trips, use more fuel-efficient vehicles and decreasing vehicle miles traveled.
- Educate its citizens regarding energy efficiency, generating sources, and conservation, not only for their benefit, but to ensure that citywide resource allocation decisions in years to come will reflect the wishes of an informed citizenry.

ACTION PLAN

Action Item	Lead Agency
Short-Term	
Establish an energy district if justified by BED's feasibility	BED
study of district heating and cooling. An energy district is	
a "mini-utility system" that serves the energy needs of one	
or more energy users.	
Analyze the potential of operating city-owned vehicles on	BED
alternative fuels and periodically review the analysis to	Public Works
consider changing conditions and opportunities.	
Develop guidelines for tree heights and species selection	Parks & Recreation
that maximize energy efficiency.	
Revise minimum housing standards to improve the energy	Public Works
efficiency of rental housing.	BED

M. I' T			
Medium Term	DED		
Develop "time-of-sale" ordinance for multi-family	BED		
residential housing requiring minimum energy efficiency	CEDO		
standards be met before sale of structures.			
Revise the Energy Efficiency Ordinance for new	BED		
construction to integrate new technologies.	Public Works		
	Planning Zoning		
Develop an overall energy budget to manage the city's	BED		
energy consumption. For electricity, the budget should be			
based upon local generating capacity.			
Review vocational curricula to promote energy efficiency	BED		
and to develop programs to prepare students for	Schools		
employment in new energy-related fields.			
Sponsor forums for architects, developers, contractors,	BED		
and others to inform them about new city ordinances,	Public Works		
regulations, and standards and to provide technical	Planning Zoning		
assistance as to how they can incorporate new analytic and	2 2		
production techniques in their work.			
Long-Term			
Examine the costs and benefits of requiring new	BED		
development to either pay an energy impact fee or make an	Planning & Zoning		
offsetting investment in efficiency.			
Prepare an evaluation of the citywide potential, constraints	BED		
and impacts associated with the development of new			
renewable energy sources - including fuel cell,			
cogeneration, biomass, solar, geothermal, hydro, wind,			
and methane.			

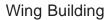


City of Burlington, VT 1996 Municipal Development Plan

Riverside Avenue



High Grove Court



Burlington recognizes all people have a right to safe, decent, and affordable housing. Housing options include a wide range of living situations including single-room occupancy, apartments, single detached homes, cooperatives, condominiums, group homes and co-housing, and are accessible to people with disabilities.



South Willard St.

IX. HOUSING PLAN

Vision Statement

All people living in Burlington have a right to safe, decent, and affordable housing. Burlington's future housing needs are met primarily through rehabilitation and conservation of the existing stock. New housing construction is encouraged in the Downtown, and focused on meeting gaps in affordability, design, service and to enhance neighborhood diversity.

Housing options include a wide range of living situations including single-room occupancy, apartments, single detached homes, cooperatives, condominiums, group homes and co-housing, and are accessible to people with disabilities. Opportunities exist for low- and moderate-income people to own their own homes. Housing blends with the city's natural surroundings and is energy efficient.

In June of 1995, the City of Burlington completed *The 1995 Burlington Consolidated Plan for Housing and Community Development* ("Consolidated Plan") as required by the US Department of Housing and Urban Development (HUD). This plan outlines in some detail the city's housing needs, opportunities, programs and future strategies. Rather than duplicate this information here, the Consolidated Plan is adopted by reference as part of this Plan.

This section summarizes the housing needs of the city - including those of low- and moderate-income people. It advocates stable neighborhoods, affordability, diversity in housing options, protection of the housing stock, and equality of opportunity. Committed to the rights of all people to safe, decent, and affordable housing, Burlington has worked actively to implement these goals through a series of programs and policies including a housing preservation program, an inclusionary zoning ordinance, a security deposit ordinance, and fair housing legislation.

A Regional Issue

Housing is first a regional issue. Burlington continues to carry more than its share of the responsibility for meeting the affordable housing needs of the region. Burlington provides approximately 85 percent of all subsidized or assisted housing in the county, yet is home to only 30 percent of the population. All municipalities in the region must work together and share in serving Chittenden County's housing needs. Burlington will continue to work with other communities in the region to share fairly the provision of housing for the homeless, the disabled, low-income households with children, and renters of every income - classes of housing consumers that are typically excluded from communities surrounding Burlington.

Trends in Housing

The 1990 US Census indicates that Burlington has 15,480 units of housing, not including dormitory rooms and other group quarters. The housing stock increased by more than 14% from 1970 to 1980, and 12% between 1980 and 1990. Burlington's housing stock is 60 percent rental and 40 percent owner-occupied. While the number of dwelling units increased over 12 percent from 1980 to 1990, the number of rental units rose more than 20 percent, suggesting a continued shift away from owner-occupied housing. This is especially true of the Old North End neighborhood. The city's housing stock includes about 4,900 detached single units and 1,500 condominiums. In addition, Trinity College, Champlain College, and UVM provide approximately 5,330 dormitory spaces.

Improving the Quality of the Housing Stock

Much of the housing in Burlington is quite old. Beyond what is available from the 1990 Census, little data exist on the current condition of Burlington's housing stock. Despite recent construction, almost half of the city's housing stock was built before 1940. Many units are not energy efficient, adding unnecessary costs for both the individual and society. This older housing must be properly maintained so that it will not deteriorate. Many units, both rental and owner occupied, will need substantial rehabilitation within the next ten years.

To preserve the housing stock, the city-run Home Improvement Program (HIP), implemented in 1983, provides low-interest loans to repair and rehabilitate housing. Further, the city's Minimum Housing Inspection Program has been enforcing minimum rental housing standards since 1981. The city's Minimum Housing Standards were revised several years ago, but they must be aggressively enforced if housing is to be safe and habitable. The overall improvement of the city's housing stock will continue to be a high priority over the next several years.

Housing as the Key to a Livable Community

No community can be considered truly successful if people don't actually want to live there. When people live in a community they become invested in its future success, and add a vitality and spirit that encourages economic development, controls crime and sustains a higher quality of life.

MIX OF HOUSING TYPES AND INCOMES

There is no single solution to any problem, or option that will fulfill everyone's needs. Burlington cannot, and must not, be a community that caters to one population - either rich or poor. An essential element to the city's future vitality is its diversity. A wide range of housing types and affordability to serve the needs of a diverse population will be supported within the city. This includes such options as single-room occupancy apartments, single detached homes, cooperatives, condominiums, group homes and co-

housing. In addition to various housing types, housing that serves a range of incomes must also be included and encouraged.

ENCOURAGE HOUSING DOWNTOWN

Burlington's downtown must be more that a cultural, retail and commercial center - it must be a neighborhood. To really become a neighborhood will require additional housing - especially market-rate.

Although the Urban Renewal Policy of the 1960's removed nearly all housing downtown, there remain 542 units, including 160 in two elderly housing projects, 10 single family-detached, and 106 apartments located above commercial space. Approximately 80 percent of the downtown housing is renter-occupied. Additional market-rate residential development has recently been approved for the downtown, and more is being considered. To sustain a vital downtown, city policy will encourage the further creation of housing within the Central Business District and the Downtown Waterfront, and within Neighborhood Activity Centers.

Meeting the Needs of All

Burlington is home to a wide range of people. Family households and unrelated individuals sharing housing include both traditional and nontraditional families, with and without children. Elderly and those without cars choose to live in Burlington to be near jobs, services, and health care. People with disabilities live here, as do people from all different income levels. Over the next ten years the median age of the population will continue to rise and Burlington will have more elderly residents. Burlington will also see an increasing number of single-parent families and two-income families. These trends will affect the demand for housing.

HOMELESS

Some people have no homes at all. In 1995, the Committee on Temporary Shelter (COTS) estimated that city shelters were serving nearly 115 homeless people and five families; another four families were on the waiting list. This number underestimates the homeless population in Burlington because many people choose not to, or cannot, stay in shelters for lack of room. Instead they sleep on the street, in abandoned buildings, or in the woods. Homeless families may move in with friends, family, or stay in their cars. In Burlington, as elsewhere, homelessness remains a problem.

PEOPLE WITH DISABILITIES

Approximately 5,000 people with disabilities live in Burlington. Of these, 25 percent have disabilities for which they use special equipment and household adaptations. Present law requires that a percentage of new or substantially rehabilitated rental and multi-unit projects be accessible. The City needs to ensure that this law is enforced and that these units are truly accessible. In addition, we must promote design standards that allow people with disabilities access to more private housing.

STUDENTS

Burlington is home to three residential post-secondary schools; the University of Vermont, Champlain College, and Trinity College. Approximately 45 percent, or 4,000, of these students live off campus.

According to the University of Vermont (UVM), 2,671 undergraduate students lived in 1,263 units in Burlington, each averaging 2.1 students. Assuming the same rate for all three institutions, college students occupy 1,700 dwellings, or close to 12 percent of Burlington's housing. Students who live off campus create inflationary pressure on rents; attract absentee landlords; and contribute to noise, traffic, and parking problems.

Responding to City and neighborhood concerns, UVM has attracted students back to campus through the construction of student housing, policy changes, and better residence halls. In addition, the University's *Good Neighbor Program* is working to improve relations between students and neighborhood residents, and educate students about the responsibilities associated with off-campus living.

AFFORDABILITY

Burlington is committed to affordable housing. In 1989, almost 10 percent of the city's existing housing stock received some help from federal, state or local programs to keep it affordable. Of these units, 856 were family housing; 514 units are dedicated to the elderly. Also, 335 households took part in voucher programs that give direct financial help to people seeking rentals on the open market. Burlington addresses the need for affordable housing through numerous programs, including:

- One cent on the tax rate for the Housing Trust Fund, which finances production and preservation of housing for low- and moderate-income people.
- The Inclusionary Zoning Ordinance that requires new housing developments to create affordable units.
- Expansion of the stock of single-room-occupancy (SRO) housing.
- The condominium conversion and the housing replacement ordinances, which preserve existing affordable housing.
- A Home Improvement Program (HIP) to repair and rehabilitate the existing housing stock (HIP has helped more than 500 houses since 1983.).

Still, housing remains costly for many Burlington residents. Housing sale prices and rents have grown twice as fast as household incomes in Burlington since 1980. Between 65 and 75 percent of those tenants who are not receiving public rental assistance are spending more than 30 percent of their gross income for rent. By definition, these tenants are living in housing that is not affordable.

While rental housing has moved out of the reach of low-income households, home ownership has moved out of reach of moderate and middle-income households. An annual income of nearly \$30,000 - earned by only 30% of Burlington's tenant households - is

necessary for the most modest homes and condominiums available in Burlington. To afford the median-priced home, a family needs an income of \$40,000.

As the waiting lists for subsidized housing show, the city needs more affordable units. According to the <u>Burlington Housing Data Base Study</u> (1990), the city needed an additional 300 to 400 units of housing that cost less than \$400 a month just to meet an existing need.

This housing should not come predominately from new construction. It should be created by adding units in existing structures, making existing units affordable through programs like Lake Champlain Housing Development Corporation (LCHDC) and Burlington Community Land Trust (BCLT), converting for-profit rentals to tenant-owned co-ops, or subsidizing low-income families to compete in the open market. Where available, the City should take advantage of federal and private funds for construction of low-income housing. The City must also ensure housing that receives public investment remain affordable and rents stable for a long period of time.

For residents who do not meet the eligibility criteria for assisted housing, a low-rent, single-room occupancy is an option. An SRO is a single-room with shared kitchen and bath. We have no data on the number of SRO units in Burlington, but anecdotal information suggests that there are far fewer today than in the 1970s. COTS operates a subsidized SRO with 22 units and has recently received a permit to add 21 units in the Old North End. The Cathedral Square Corporation manages 20 SRO units in Burlington. There are also numerous privately owned SROs. SROs are a necessary part of this city's housing stock, as they provide permanent residence for people who can afford to pay rent weekly, but not monthly.

FIRST-TIME HOMEOWNERS

Many families are on the brink of ownership - yet need just a little more for the initial downpayment, or for mortgage rates to come down another .5%. With increasing pressures on social programs at the federal and state levels, it will become increasingly important for city programs to help families and individuals become first-time buyers. Coupled with a fair paying job, home ownership can be the final step towards breaking the bonds of social dependence.

Housing Policy and Action Plan

CITY POLICIES

THE CITY OF BURLINGTON WILL...

• Support and implement programs to preserve and upgrade the existing housing stock.

- Enforce ordinances, such as inclusionary zoning and minimum housing, that promote housing opportunities, safety and affordability.
- Support innovative ownership alternatives to simple home ownership and for-profit rentals, such as community land trusts, limited-equity condos, co-ops, and nonprofit rentals.
- Encourage a wide range of housing options to meet different and changing needs of households with children, the elderly, people with disabilities, and moderate- and low-income households.
- Support housing models, organizations, and programs that insure perpetual affordability.
- Ensure that no renters or buyers seeking housing are discriminated against on the grounds of race, religion, gender, sexual preference, or disability by enforcing laws protecting this right.
- Ensure adequate housing opportunities for people with disabilities.

ACTION PLAN

Action Item	Lead Agency
Short-Term	
Implement the Housing Affordability Strategy found in The 1995 Burlington Consolidated Plan for Housing and Community Development.	CEDO
Participate with the University, and other institutions as applicable, to develop locations and designs for student on-campus housing through the Master Planning process.	Planning & Zoning
Implement Common Ground: A Strategic Plan for the Old North End Enterprise Community.	CEDO
Monitor ratio of housing to commercial development	CEDO
growth	Planning & Zoning
Encourage the appropriate reuse of buildings for mixed -use including residential.	Planning & Zoning
Medium Term	
Support and enforcement of the Minimum Housing Inspection Program.	Public Works
Play a proactive role in establishing a regional affordable housing allocation plan.	Planning & Zoning CEDO
Require a Certificate of Habitability for existing apart-	Public Works
ments for a change in occupancy.	
Study the feasibility of allowing SRO's in low-density zones.	Planning & Zoning
Long-Term	
Expand shared living and group home opportunities.	CEDO
Examine the feasibility of public bonding for housing	Planning & Zoning
preservation and, where appropriate, for housing	CEDO
construction.	Treasurer
Expand local housing investment by Burlington	Treasurer
Employee Retirement Fund. Explore a linkage program for commercial development	Planning Zoning
to ensure housing growth keeps pace.	1 mining Zoning
Implement a system to investigate and act on claims	CEDO
under the city's anti-discrimination ordinance. Expand the reverse-equity program for the elderly and	CEDO
disabled.	



City of Burlington, VT 1996 Municipal Development Plan

Edmunds Middle School



Barnes School



Burlington High School

Burlington's schools serve to enhance the city's competitive advantage as an attractive place to both live and work.



St. Josephs School

X. EDUCATION PLAN

Vision Statement

The Burlington Schools, in partnership with families and the community, will educate and inspire students to influence and shape the future. The City's educational system prepares our youth to be contributing members of our society and their communities, and it trains them in the skills necessary to be successful in the workforce. Burlington's schools also serve to enhance the City's competitive advantage as an attractive place to both live and work.

Burlington's schools, and the education of our youth, are an essential component to the future health and vitality of the city. We must provide adequate facilities in response to growth and demographic changes, and use the school buildings and grounds appropriately and efficiently. Burlington's educational facilities are an important community asset which must be considered in planning for the future.

In David Soucher's book *City Comforts: How to Build an Urban Village* (City Comforts Press, 1995), he characterizes children as an "indicator species for successful communities." If our communities are attractive to families with children, then they are more likely to be sustainable over time. This section discusses Burlington's public school system and its facilities.

The city is divided into six neighborhood school districts for the purposes of distributing school enrollment. Burlington's public school system maintains six elementary schools, two middle schools, one alternative school, an area Technical Center, Burlington High School, an administrative building, and a maintenance facility. Presently, one building houses both the Edmunds Middle School and Elementary School.

Assessment of Educational Facilities

As the following table indicates, significant growth has occurred at Flynn and Smith Schools, in part due to the closing of the Thayer School and the increase in school-age population in the New North End neighborhood. Classroom additions at both schools have been able to accommodate the increased enrollments to this point, although Flynn is at maximum capacity, with little capacity remaining at Smith.

Burlington School System Enrollments			
Elementery Cahaala	1000 Envollments	1005 Engellments	
Elementary Schools	1989 Enrollments	1995 Enrollments	
Champlain	306	307	
Edmunds	215	213	
Barnes	197	191	
Wheeler	265	255	
Flynn	309	437	
Smith	231	363	
Middle School			
Edmunds	378	374	
Hunt	319	465	
High School			
Burlington High School	949	1,064	
Source: Burlington School Department, 1995			
Source. Durangion School Department, 1773			

Major renovations and additions to Barnes and Wheeler Schools have eased a previously over-crowded situation, and brought their libraries and instructional spaces up to the state's Public School Approval Standards. Both schools have remaining capacity for additional enrollment.

Edmunds Middle School shows little change in enrollment, with Hunt Middle School mirroring the growth of enrollments at Smith and Flynn. The closing of the Thayer School has provided capacity at Hunt for increased enrollment. Burlington High School has seen an increase in enrollment of 64 students - currently middle school enrollments point to a continuation of these increases at the high school.

FACILITIES PLANNING

Transforming Burlington into a "Learning Community" was the focus of a School Board and Department long range strategic planning process in 1995. This process involved over eight hundred individuals during the 1994/1995 school year, and resulted in the development of nine strategic planning goals. One of these goals, "to develop a funding plan for consistent, long range financial stability," included a review of all current educational facilities to ascertain their needs for capital improvements and required work necessary for complete Americans with Disabilities (ADA) compliance, as well as outline their potential use. The result of this process provides an important blueprint for furthering the city's educational goals, identifying opportunities for sharing resources and improving the efficiency of existing facilities.

Part X - Education Plan Page 2

School Property and Outdoor Playing Fields				
School Admin & Maint.	Total Acreage 17.74	Square Feet 57,191	#Playgrounds/Fields	
	<u>Elementa</u>	ry Schools		
Champlain	9.7	61,776	3	
Edmunds	6.5	23,770	1	
Barnes	3	28,800	3	
Wheeler	2	39,080	1	
Flynn	10	40,152	3	
Smith	14	30,900	8	
	Middle Schools			
Edmunds M.S.	(inc. w/ elem Sch.)	65,647	(inc. w/ elem Sch.)	
Hunt M.S.	20.6	76,282	4	
High School				
Burlington H.S.	44	236,169	7	
<u>Total</u>	127.54	659,794	30	
Source: Burlington School Department, Burlington Dept. of Parks & Recreation. 1995				

PROJECTING NUMBERS

The School Department utilizes state estimates of the city's population from the VT Department of Health, and population forecasting information provided by an area demographer in order to project future enrollments. Population-based projections however, typically do not include housing data - growth in housing stock, changes in family size and household characteristics.

Major demographic changes have occurred over the past several years which may greatly influence future enrollments. These include a gradual decline in the average family size - which many experts believe has stabilized at 2.3 people per household. This is due in part to more single-parent families and fewer numbers of children per family. Another important factor is the aging of the population and the "graying" of some of the city's largest neighborhoods. This is particularly true in the New North End. As these neighborhoods gradually transform back into family neighborhoods with children, there will be an impact of school enrollments - most likely one that shifts capacity needs between neighborhoods rather than an increase in total system growth..

LONG-RANGE FINANCIAL STABILITY

One of the priorities identified in the School Department's Strategic Planning Process was "to develop a funding plan for consistent, long range financial stability." Recent events at

the local, state and federal levels have drastically transformed the financial landscape for publicly funded schools. No longer are traditional programmatic funding sources available at the same levels - and in some cases at all. In addition, local property taxpayers are overly burdened and increasingly less likely to make-up the difference.

Schools are a Community Asset

Schools are an essential element within a neighborhood. They serve to establish connections between families, and are focal points for neighborhood interactions and communication. This communication and familiarity between people is the essential bond that creates and maintains what we call "communities."

Burlington's public schools are a tremendous neighborhood asset. School buildings provide meeting spaces for community groups and other city programs. Recent renovations to both Barnes and Wheeler Schools have included the creation of community rooms to meet the needs of community groups for additional meeting space. In addition, Wheeler also provides space for other community service providers to improve their delivery of service to families with children.

School playgrounds also serve as neighborhood recreation areas. The Parks and Recreation Department Five Year Action Plan notes:

Ideally, schools should be located as buildings within a park and as focus points for neighborhood activities of both an indoor and outdoor nature. Unfortunately, Burlington's schools were constructed with a single purpose - educational usage - in mind and do not readily adapt to other integrated programs.

The Burlington Parks & Recreation Department makes significant year-round use of school facilities in providing a wide variety of after-school, evening and summer activities for youths and adults. School property use by Parks & Recreation, as well as other community groups, continues to grow and points to the indispensable role that schools play in the life of the city. Schools must continue to serve multiple functions in the future. The current demand for use of school facilities by Parks & Recreation cannot always be satisfied however. This situation is expected to continue unless significant indoor recreation space can be provided elsewhere in the community.

Moreover, as demographics change, our school system will have to meet new needs and patterns. For example, schools that are closed all summer and kindergartens that operate less than half days create schedule conflicts for working and single parents, and may not be the most efficient way of utilizing these facilities.

The opportunity for neighborhood interactions in and around schools should be expanded and should include all residents - especially seniors. Examples include improvements to pedestrian access to schools, locating community services and housing in close proximity

Part X - Education Plan Page 4

to schools when possible, or the inclusion of school facilities into Neighborhood Activity Centers. Doing so should improve access between schools and other neighborhood activities thus lessening local traffic. This is especially a problem in the New North End where the development pattern is more dispersed, and the neighborhood is divided by North Avenue.

Education Policy and Action Plan

CITY POLICIES

THE CITY OF BURLINGTON WILL...

- Ensure excellent educational services and facilities.
- Use school facilities efficiently so that buildings and play fields can be used for multiple functions.
- Provide educational opportunities and schedules that reflect residents' needs and provide flexibility in meeting future needs.
- Support schools as an essential component to supporting neighborhoods.

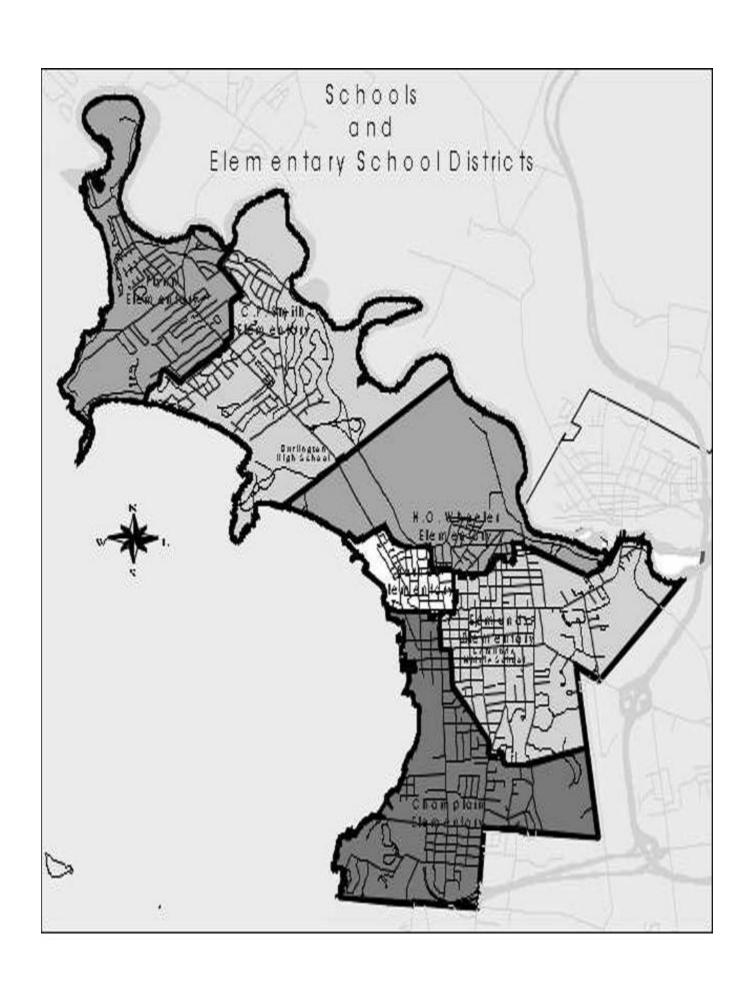
ACTION PLAN

Action Item	Lead Agency	
Short-Term		
Encourage community services and senior housing to locate in close proximity to schools.	Planning & Zoning	
Provide safe routes for children to schools - especially those for pedestrians and bikes.	Planning & Zoning Parks & Recreation Public Works	
Continue to consider ways to expand the use of school facilities for other community activities, and to design additions that lend themselves to multiple uses.	Schools	
Consider the potential impacts to school enrollments when evaluating new developments through greater School Dept. involvement on the Technical Review Committee.	Planning & Zoning Schools	
Medium Term		
Estimate future school enrollments based on a combination of population, land use and housing projections.	Schools	
Identify stable funding mechanisms to support school	Schools	

Part X - Education Plan Page 5

infrastructure needs.





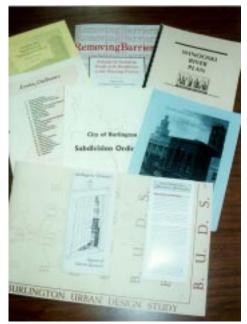


City of Burlington, VT 1996 Municipal Development Plan

Burlington Planning Commission



Burlington Zoning Map



Planning Documents



Neighborhood Activity Center Design

Burlington is a city in which residents participate meaningfully in decisions that effect them.

Neighborhood and citywide groups as well as individuals and adjacent communities have a clear voice in a city policymaking process that is open and accessible.

IMPLEMENTATION PLAN

Vision Statement

Burlington is a community where residents participate meaningfully in decisions that effect them. Neighborhood and citywide groups as well as individuals and adjacent communities have a clear voice in a city policymaking process that is open and accessible.

Many issues, including those in the areas of transportation, housing, land use, solid waste, recreation, and the protection of natural areas (including Lake Champlain and the Winooski River) are addressed in regional forums. Burlington continues to cooperate with neighboring communities and regional entities to seek comprehensive solutions.

This plan sets forth a vision for Burlington over the next ten years and offers both policies and actions to implement that vision. The document by itself, however, will accomplish nothing included here. The City, through its Departments, Commissions, Administration and City Council must now implement this plan through the array of tools available, and in partnership with other governments and the private and non-profit sectors.

This section discusses how various implementation tools relate to specific actions recommended in the plan. Each section of the Plan contains a more complete discussion of necessary actions.

Regional Cooperation

Cooperation between state and federal government, neighboring municipalities, regional entities, and the non-profit and private sectors will be absolutely necessary for many of the policies in this plan are to be successfully implemented. Pooling resources make regional solutions more cost efficient and effective. Regional coordination and cooperation must be an on-going process.

Many of the issues facing Burlington, such as natural resource protection, transportation, housing and waste management, must be addressed on a regional level. All communities, for example, must share fairly the provision of housing for the homeless, the disabled, low-income households with children, and for renters of every income. Each section of the Plan describes regional relationships associated with the area discussed. Burlington must continue to work with other municipalities, both individually and in collective regional forums, to seek solutions to common problems.

However, the City must insure that Burlington residents are fairly represented in these regional forums. Burlington has over 28% of the County's population, one third of the County's jobs, and has been designated a "Regional Growth Center" in regional land use

plans. Yet, when it comes to regional land use policy and decision making, Burlington is in no better position to effect change than a community one tenth its size.

Burlington is presently a member of the following regional organizations:

<u>Chittenden County Transportation Authority (CCTA):</u> A regional transportation authority responsible for providing public transportation in Burlington, South Burlington, Winooski, Essex, and Shelburne. Burlington representation: 2 of 10 members.

<u>Chittenden County Metropolitan Planning Organization (CCMPO)</u>: Governed by federal law, the CCMPO identifies, plans, prioritizes and programs transportation improvements within the urbanized portion of the region. Burlington representation 1 of 9 voting members.

<u>Chittenden Solid Waste District (CSWD):</u> Consisting of a majority of municipalities in the region, the District is responsible for management and disposal of solid waste including the planning, siting, design and operation of facilities. Burlington representation 1 of 16 members.

<u>Winooski Valley Park District (WVPD):</u> This nonprofit organization acquires and manages open space, wildlife habitat, farmland, and other natural areas within the watershed of the Lower Winooski River. Burlington representation 1 of 7 members.

<u>Chittenden County Regional Planning Commission (CCRPC):</u> This quasi-governmental organization includes all municipalities in the county. It provides planning support services to its member communities, and develops regional land use plans and policy. Burlington representation 1 of 22 members.

Public/Private Partnerships

Combined efforts between public and private partners is another way to implement the policies set out in this Plan. Presently the City participates in many shared efforts including:

- The Downtown Partnership
- The Parking and Transportation Council
- Banking Council
- Bio-Tech Task Force
- Chittenden County Alcohol and Drug Alliance

Cooperation between the public, private and non-profit sectors plays an important role in problem solving and future planning. Burlington must continue to work with the University and the other institutions to solve parking, transportation and housing problems. The Planning Commission and the institutions will cooperate to find appropriate sites for on-campus housing and concentrate new development. CEDO will continue to work with the private sector to retain and expand the job base. Public/private partnership may be particularly helpful in resolving transportation issues. The City should explore the potential for a downtown transportation management organization that would implement solutions to congestion and parking. This organization would include representatives from the business community, city government, and users. The City should join with the private sector to revitalize the transitional areas north and south of the downtown.

Inter-Departmental Collaboration

Coordination and partnerships must extend to city departments as well. While city government is separated into 25 departments and offices - many of which with an independent governing commission - all city government serves the residents and taxpayers of Burlington. In order to serve the community most effectively, city departments must continue to search for ways to improve communication, share information and collaborate on joint projects. For example, Planning and Zoning, Parks and Recreation, and the Schools can work together to design more diversified, multifunctional school facilities. Planning and Zoning can share economic, demographic and geographic information with other departments, and coordinate permitting processes with Public Works. CEDO and Public Works can coordinate the minimum housing inspection program with the low-interest Home Improvement Program.

Inter-departmental collaboration begins with improvements in communications between departments and how the city shares information both internally and with the public. Realizing that many city functions rely heavily on data/communication flows, and that efforts to date have focused on the specific needs of individual departments, an evaluation of current city investments in technology was started in 1996. Recommendations will address how the City can make the best use of emerging technologies to improve efficiency and services. This study must be followed by the necessary investments in hardware, software and training. In this information age, city government cannot afford to be left behind.

Each section of this Plan's Action Plan defines specific actions to be accomplished within a generalized time frame, and identifies key partners responsible for specific actions The following table outlines these relationships in general:

Topic Area:	Key Partners:
Land Use	Planning & Zoning
	All City Departments
Natural Environment	Planning & Zoning
	Public Works
	Parks & Recreation
Built Environment	Planning & Zoning
	Public Works
	Parks & Recreation
Historic Preservation	Planning & Zoning
	CEDO
Transportation System	Public Works
	Planning & Zoning
	CEDO
Economic Development	CEDO
	Planning & Zoning
Community Facilities and Services	All City Departments
Energy	BED
	Public Works
	Planning & Zoning
Housing	CEDO
	Planning & Zoning
	Public Works
Education	School Dept.
	Parks & Recreation
	Planning & Zoning

Inventories, Sector Plans and Studies

The policies and actions recommended in this plan originate from public input, technical information and analysis. Planning and development is an ongoing process; as conditions change, actions needed to implement polices and visions will change. Moreover, additional research is needed to implement some of the policies in this plan.

Collection of Information:

Inventories, plans, and studies are all based on relevant information. Each department in city government collects information on its projects and programs. Examples include traffic data and road conditions, building and zoning permits, land records and socioeconomic data. This information should be collected in such a way that it will be useful

and available to all city departments. For example, GIS is an important tool in gathering and analyzing spatially-referenced information. Nearly all data collected by the City is referenced to places on the ground. The city should encourage departments to collect information in a format compatible with the GIS database.

Inventories and Studies:

This plan recommends the completion of several inventories and studies that will help in formulating new regulations and programs. They will also be important tools for monitoring progress and success. Examples include an assessment of city-wide preservation activities, an inventory of public buildings and their condition; a feasibility study for an energy district in the CBD; an inventory of public art and cultural facilities; and inventories of historic buildings and natural resources.

Sector Plans:

While the Municipal Development Plan defines general policy directions and land use for **all** areas of the city, more detailed sector plans are necessary to address the needs of certain neighborhoods. These include Riverside Avenue, the Pine Street corridor, Downtown, the Downtown Waterfront, and the Intervale. These sector plans should be based on already-existing work, such as the Waterfront Urban Renewal Plan, the Riverside Revitalization Plan, and the Downtown Partnership Study, and should include extensive public participation and review.

Besides these sector plans, the City, through the Planning Department, Community and Economic Development Office, and Neighborhood Planning Assemblies should undertake conservation plans for each neighborhood in the city. These plans would inventory building conditions, identify important physical elements, and define the architectural characteristics worth protecting in each neighborhood. These include traditional building types, setbacks, street layout, densities, landscaping, and street details. Each plan would also include an inventory of the current level of neighborhood services. New development or changes should reinforce and enhance the existing neighborhood patterns and not diminish the current level of neighborhood services as defined in this plan. Work on the sector and conservation plans should begin shortly after the plan is adopted.

Zoning and Subdivision

State law gives municipalities the power to regulate land use through tools such as zoning by-laws, subdivision regulations, shoreline by-laws, and an official map. These regulatory tools address many different issues, among them design control, historic preservation, parking and traffic, densities, land use and cover, and resource protection. While other plans, programs and policies affect development within city, the zoning and subdivision regulations are the City's principle legal means to carry out the policies and recommendations of the Municipal Development Plan.

This plan recommends studying the following land use changes for inclusion in the zoning ordinance as an example.

- Protection of all or part of the following natural areas: Mount Calvary Red Maple Swamp, Redstone Quarry, Barge Canal, Flynn Estate, Northshore Wetland and those areas identified as Natural Areas of Local Significance
- The creation of neighborhood mixed-use activity centers in the following proposed locations: Ethan Allen Shopping Center area, and along North Winooski Avenue near Riverside Avenue
- Evaluate the types of uses encouraged in the South End.
- Complete the Institutional Core Overlay Zone.
- Evaluation of street design and lighting standards
- Increase densities within major transit corridors, including North Avenue, Shelburne Street, South Winooski Avenue, Pearl Street, and Colchester Avenue
- Implementation of shoreline zoning along the Winooski riverfront and the lake shore.
- Adoption of a trip reduction and redistribution ordinance to limit the number of vehicle trips generated by new development.
- Re-evaluation of parking requirements and further enhance use of the Parking and Mass Transit Capital Fund.

The land use section, as well as other parts of this plan, contains more detailed recommendations regarding changes in the zoning and development regulations. While all recommended changes should be included in the revised zoning ordinance, priority should be given to protecting the natural environment, designating growth and activity centers and implementing trip reduction and parking strategies.

PROCESS CHANGES

Policies in this plan can be implemented through changes in the development and permitting process. The City should consider ways in which the development review process can be streamlined and simplified to insure that the cost of development does not rise unnecessarily. Ordinances and guidelines should be easily understood by the public, and requirements should be made clear at the outset. To accomplish this:

- The City should undertake a comprehensive review of all development permit processes to ensure consistency, compatibility and efficiency.
- The City should establish a central permit office for "one-stop shopping" in the downtown.
- The Planning Commission, in concert with the Design Review Board and the Public Works Commission, should establish a set of *Burlington Design Principles* to serve as the foundation for future public and private development.
- The Design Review section of the Zoning should be rewritten to emphasize the integral relationship between proposed projects and neighborhood patterns.

Capital Improvement Program

The City of Burlington and its various departments own approximately 1,000 acres of land. Excluding those at the Burlington International Airport, but including Burlington

Electric Department, the City owns property valued at over \$193 million. These buildings serve functions as diverse as ice hockey, offices, public meeting space, and wastewater treatment. The City also owns sewer and water lines, roads and right-of-ways, electric lines and other utilities.

To provide services, the City must maintain its existing facilities and utilities, upgrade them to meet community interests and needs, and expand them as the city grows. Police and fire vehicles must be replaced regularly, sewer treatment facilities must be upgraded to improve the quality of Lake Champlain, and the City must expand its park system as the number of users increase.

Capital improvements cost money. Various needs must be balanced against each other. To do this effectively, the City has implemented a capital budget and program that proposes and ranks capital projects based on goals established in this plan and on established standards for the appropriate provision of services. The Capital Improvement Plan (CIP) outlines a schedule for the expenditure of municipal funds for public physical improvements over a six-year period. It consists of two components: **a capital budget**, which lists and describes the capital projects to be undertaken during the coming fiscal year, and **a capital program**, which lists and describes the capital projects proposed to be undertaken during each of the following five years.

Capital improvement projects are typically major expenditures, such as the purchase, construction, reconstruction, renovation, or replacement of a public building, facility, or major equipment item. The capital program gives highest priority to projects that in the long run will save the city money, especially in terms of energy efficiency, or that are necessary to protect public health and safety. Projects to expand, replace, or upgrade facilities must be based on established service standards. New projects should not be financed at the expense of neglecting existing infrastructure and facilities.

Capital improvements do not include maintenance of existing facilities, property and buildings however - perhaps the City's most pressing financial need. The City must continue to invest in maintenance - making it a high priority - in order to make the best use of existing resources and prevent unnecessary capital costs caused by neglect.

Impact Fees

To help mitigate the impact of new development on the property tax, the Vermont Legislature enacted legislation allowing communities to assess equitable impact fees on new development to cover associated municipal capital costs. Since 1992, the City has been assessing impact fees for a range of municipal services including transportation, fire, police, parks, library and schools. In FY95, over \$140,000 in impact fees were assessed on new or expanded development.

The use of funds collected through Impact Fees is limited to capital improvements to accommodate the demands created by new growth. Impact fees must be used within six

years of payment. When fees raised are not enough to address large capital improvements on their own, they could be used to pay down the debt associated with the issuance of a bond for the same purpose. The City will continue to monitor the assessment and expenditure of impact fees to ensure fees assessed are paid in a timely manner, and that fees levied are properly utilized.

Program and Project Implementation

While many of the goals of this plan can be implemented through legislation and regulation of the private sector, many other policies must be put into place by direct action of the City and its departments. These programs will need the financial support of the capital planning process, impact fees, or direct budget allocation. Major new programs and actions that have priority include:

- Third Century Tree Planting Program.
- Land conservation program to purchase or protect natural areas.
- A transportation system and demand management program.
- A Traffic Calming Program and Truck Route Plan.
- Improvements to Riverside Avenue and Main Street.
- Treatment of stormwater run-off.

On-going projects that have priority include:

- Sidewalk and pedestrian improvements.
- Accessibility improvements.
- Downtown Waterfront Infrastructure.

LEGISLATIVE INITIATIVE

In some instances, implementation of this plan will require legislative initiative on the state or federal level. The City must work with the appropriate legislative groups to realize the plan's vision, for example, to expand the allowed land uses along the downtown waterfront.

EVALUATION

This plan recommends ongoing evaluation of the various programs recommended to determine their effects and if they are in fact successful. This is particularly important for ordinances and zoning bylaw changes. For example, the City should monitor the existing inclusionary zoning, housing replacement, and housing demolition ordinances to assess their effectiveness in preserving affordable housing.

ONGOING COMMUNITY PARTICIPATION

This document was shaped by the concerns of the citizens of Burlington. This process does not end with the completion of the Plan. The City must continue its policy of sharing information with the public, listening to their concerns, and acting on them. Only in this way will the Municipal Development Plan be an effective document for guiding growth

and change. Community participation must include citizen education and ways to encourage meaningful involvement. To improve citizen education the City should:

- work with the school department to add a city government module to civics classes.
- encourage the media to more fully cover all aspects of city government.
- continue the town meeting television coverage of Planning Commission and City Council meetings.
- extend the use of town meeting television to all city commissions.

To encourage meaningful participation the City should:

- explore ways to strengthen the neighborhood planning assemblies and improve attendance.
- better publicize and advertise neighborhood planning assembly meetings and encourage early review of major development proposals at the neighborhood level.
- insure neighborhood planning assembly participation in and review of institution development plans and projects.

Relationship to Other Plans

City of Burlington, VT 1996 Municipal Development Plan

Relationship to Other Plans

The impacts, both positive and negative, associated with growth and development knows no boundaries. It is incumbent on every community to look beyond its borders, and evaluate the potential impacts associated with changing land use patterns. Individual developments must be compatible with adjacent neighborhoods, and so too must the plans of communities and regions. This portion of this Plan briefly examines its compatibility with similar plans in adjacent communities and that of the region.

Compatibility with Adjacent Municipalities

Burlington shares boundaries with three communities: the cities of South Burlington and Winooski, and the Town of Colchester. The Winooski River separates Burlington from Colchester and Winooski. Only with South Burlington, do land uses abut directly.

CITY OF SOUTH BURLINGTON

The table below presents a comparison of proposed land uses along the border shared between Burlington and South Burlington. For the most part, land uses are compatible. In two instances, one in each community, residential uses abut non-residential use. This is the result of historical growth and land use patterns, and must be addressed on a case-by-case basis through proper site planning to mitigate any possible adverse impacts.

Boundary/Location	ZONE		
	So. Burlington	Burlington	
Lake Champlain - Route 7			
Lakeshore-Central Ave.	Recreation	Residential (RL)	
Central AveRailroad	Residential MD	Industrial	
Railroad-Pine St.	Commercial	Residential (RL)	
Pine StRoute 7	Commercial	Commercial/Residential	
		(RL)	
Route 7			
I-189-Home Ave.	Commercial	Commercial/Residential	
		(RL)	
Home AveProctor Ave.	Commercial	Residential (RM)	
Route 7-Spear Street			
Route 7-S. Prospect St.	Residential MD	Residential (RM)	
S. Prospect-Spear St.	Residential/OS	Open Space (RCO)/	
		Institutional (UC)	
		montational (OC)	

Boundary/Location	7	CONE
continued	So. Burlington	Burlington
Spear Street		
I-189-Quarry Hill	Residential/OS	Open Space (RCO)/
		Institutional (UC)
Quarry Hill RdRoute 2	Residential MD	Institutional (UC)
Route 2-Patchen Road		
Rte. 2-Cent. Woods	Commercial	Institutional (UC)
Cent. Woods-Grove St.	Conservation/OS	` '
Cent. woods-Grove St.	Conservation/OS	Conservation (RCO)
Grove Street-Winooski Ri	iver	
	Residential MD	Residential (RL)
MD = Medium Density	LD = Low Density	
OS = Open Space	UC = University Campus	

SOURCE: So. Burlington Planning Department

Two areas of particular interest to the City of Burlington are the gateways into the city between Williston Rd. and I-89, and between Shelburne Rd. and I-189. Burlington will continue to monitor proposed developments in these areas for their potential impact on traffic congestion into and out of the city, and their visual relationship to the city's gateways. For more on the treatment of Burlington's Gateways, see the *Built Environment Section*.

CITY OF WINOOSKI

The Winooski River forms the boundary between Burlington, and the City of Winooski, and Town of Colchester. All three communities call for shoreline protection of these fragile areas in their respective land use policies.

Winooski and Burlington share the Winooski River Bridge (US Rt. 7) as a gateway. The Winooski Plan proposed strengthening the City's central commercial area adjacent to this gateway, and Burlington supports a small mixed commercial zone at Mill Street surrounded by low density residential on Grove and Chase Streets. These uses are generally complimentary. For more on the treatment of this gateway and the Grove Street neighborhood, see the *Land Use Section*.

TOWN OF COLCHESTER

The Colchester Plan states:

"Warners Corner Planning Area serves as a gateway to the town from the City of Burlington and is appropriate for providing concentrated commercial services and high density residential occupancy. The development of this area mirrors the development patterns of the north end of Burlington".

The New North End is the most suburban section of Burlington, and adjacent "concentrated commercial services and high density residential" land uses are not necessarily compatible. Yet the river and Route 127 act as a buffer to minimize potential disharmony. Colchester and Burlington must work together to insure an adequate traffic circulation and transportation program to prevent congestion.

SHARED RESOURCES AND ISSUES

Compatibility refers to more than adjacent land uses, it also includes the use of, and impacts upon shared resources, such as the lake and river, air, transportation systems, and regional facilities.

Transportation

Burlington shares two major arterial entrances with South Burlington, and one each with Winooski and Colchester. A tremendous amount of traffic flows through these communities traveling in and out of Burlington. This Plan suggests strategies to reduce the number of these trips to ease congestion in all communities and parking problems in Burlington.

Many communities are developing innovative approaches to traffic management. The South Burlington Transportation Management Association is one such strategy designed to ease congestion along US Route 7. Colchester and Winooski may also want to explore similar strategies to limit new trips. All four communities must work cooperatively to address congestion at our borders, and in support of expanded public transportation options throughout the region.

Burlington International Airport

Owned by Burlington, but located in South Burlington, Burlington International Airport (BIA) serves as an important transportation hub and economic resource for northern Vermont and northeastern New York. However, continued growth of the airport may pose additional impacts on neighborhoods in South Burlington, Winooski and to some extent Williston. Airport officials are encouraged to work closely with South Burlington and Winooski representatives to minimize disturbance. Similarly, communities surrounding the airport must ensure future development is both compatible and located safely outside federally-designated operational limits.

Water Quality

Burlington's plan identifies measures to protect the quality of Lake Champlain and the Winooski River. Colchester's plan mandates protection and improvement of water quality in Mallets Bay, and further suggests shoreline protection to prevent pollution and erosion. South Burlington, too, wants to maintain and protect the water quality of Lake Champlain as well as rivers and streams. Winooski calls for improved water quality in the lower Winooski River.

Urban stormwater runoff is the largest threat to water quality in this country. As Burlington, and our neighboring communities continue to grow, consideration should be given to joint efforts to monitor and address stormwater management.

Housing

Presently Burlington provides approximately 85% of the subsidized affordable housing for low-income people in Chittenden County, with Winooski providing most of the rest. South Burlington, and Colchester propose creating affordable housing in their municipalities. This is a goal compatible with Burlington's plan and should be aggressively pursued. All communities in the region must make take measures to address their fair-share housing responsibilities.

Compatibility with the Regional Plan

Although the Regional Plan recognizes Burlington's role as the major growth center for Chittenden County, there are a number of significant differences between this Plan and the Regional Plan prepared by the Chittenden County Regional Planning Commission.

1. Growth Rates:

The Regional Plan presents a vision whereby designated growth centers will accommodate 75% of future population growth - 20% of which within the regional growth center. 1990 Census figures indicate that in spite of a turn around from the population decline between 1970 and 1980 rates, Burlington accounted for less than 9% of the population growth in Chittenden County between 1980-1990. Clearly the Regional Plan's projections ignore some basic realities:

- the urban core communities such as Burlington and Winooski have limited land capacity to accommodate significantly more development.
- the economics of developing in more rural areas (land costs, parking, etc.) continue to be more attractive in the short term.
- the suburban and rural communities in Chittenden County have not yet adopted strict growth management measures which will reinforce village settlement patterns and protect rural and open space qualities.
- the ability of Burlington to significantly influence regional growth patterns is negated by the failure of the Regional Planning Commission to adopt proportional representation. Although Burlington has almost 30% of the county's population, it has only one of 22 votes (less than 5 percent) on the Regional Planning Commission.

2. Density:

The Regional Plan calls for density limits of 40-70 units per acre in the regional growth center which includes areas such as King Street and East Avenue. This assumption contradicts Burlington's goal of targeting growth to more specific areas in the city and protecting residential neighborhoods. The Regional Plan's proposal far exceeds existing densities. Further, Burlington currently measures density in the downtown using floor area ratio instead of units per acre. This said however, recent capacity studies suggest that Burlington can accommodate substantially more development without a significant increase in density, or expanding the boundaries of the Central Business District.

3. Building Heights:

The Regional Plan suggests allowances for 8-story buildings as a way to accommodate higher densities in the Regional Growth Center. However, one of the important values expressed by residents during the development of this plan was Burlington's sense of "human scale." This Plan calls for heights of no more than six stories (except for new construction on parcels where higher buildings currently exist or through available height bonuses). Burlington's Plan acknowledges that a more urban configuration, including greater lot coverage and smaller front and side yard setbacks, can achieve reasonable density levels without destroying the sense of human scale that is so important to Burlington residents.

4. Affordable Housing:

The Regional Plan originally called for a housing compact which would encourage all communities in the region to be responsible for providing their fair share of affordable housing. This would have been consistent with the objectives stipulated in the Burlington plan. However, this provision was deleted from the plan as adopted.

Conclusion

Burlington's plan is largely compatible with those of its neighboring communities. It is however, not entirely compatible with several aspects of the Regional Plan as noted above. But as long as municipalities must continue to rely on local property tax as their primary means of revenue generation, it will be impossible to adequately address issues of growth distribution within Chittenden County and fulfill the goals of Act 200.



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